



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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Oliver Twist by Charles Dickens (1837)

		Key vocab:	
	1.	Social Inequality – An unfair divide between upper and lower classes.	
	2.	Justice – Fair punishment for your actions.	
	3.	Morality – A sense of what is right and wrong.	
	4.	Orphan – A child who does not have any parents.	
	5.	Criminality – Behaviour or actions that are forbidden by law.	
When?		Key idea and theme	Key quotes
C1-5	6.	Oliver is established as a victim of social inequality .	Narrator: "He might have been the child of a nobleman or beggar." Narrator: "The orphan of a workhouse." Narrator: "Oliver was the victim of treachery and deception."
		The contrast between poverty and wealth is highlighted.	Narrator: "A pale, thin child." Oliver: "Please sir, I want some more." Narrator: "Oliver tore the bits asunder with all the ferocity of famine."
C6-8	7.	Hope is highlighted through Oliver's change in circumstances .	Narrator: "For many months he had continued meekly to submit to the domination and ill-treatment of Noah Claypole." Narrator: "London was the very place for a homeless boy, who must die in the streets unless someone helped him."
		Oliver's move to London and meeting with the Artful Dodger highlights opportunity for change .	Narrator: "He felt frightened at first, for the wind moaned dismally over the empty fields." Narrator: "Drunken men and women were positively wallowing in filth." "The walls were perfectly black with age and dirt."
C9-11	8.	Oliver is exposed to the criminality of Fagin and his gang .	Narrator: "Oliver thought the old gentleman must be a decided miser to live in such a dirty place." Narrator: "Oliver was rendered anxious by the stern morality of the old gentleman's [Fagin] character." Narrator: "The old gentleman [Brownlow] was a very respectable looking personage."
		Oliver has his first experience of the moral justice system and corruption .	Narrator: "He stood for a moment, his blood tingling from terror." Narrator: "Confused and frightened." Narrator: "He would deal as leniently with him as justice would allow."
C12-16	9.	Oliver's situation temporarily changes for the better as he is taken in by Mr Brownlow .	Narrator: "Gradually, he fell into a deep tranquil sleep." Narrator: "Oliver opened his eyes and felt cheerful and happy."
		Sikes is established as a morally corrupt and evil character .	Narrator: "The man who growled out these words was a stoutly built fellow." Sikes: "That's very likely", returned Sikes with a malicious grin."

C17-22	10.	Oliver demonstrates a sense of morality but is powerless to stop his involvement in criminal activity.	Narrator: "Oliver sat huddled in a corner of the cart, bewildered with alarm and apprehension." Narrator: "He was about to throw himself on the ground and make a struggle for his young life." Narrator: "Sikes commanded him to be silent." Narrator: "Oliver, mad with grief and terror, saw that housebreaking and robbery were the objects of the expedition."
C23-28	11.	The character of Monks shows foreshadowing of Oliver's identity.	Monks: "Throttle the girl! Said Monks impatiently." Monks: "I'll swear I saw it! Replied Monks, trembling."
C29-32	12.	Rose Maylie's character highlights the importance of innate character vs environmental influences.	Rose: "But at so early an age!" Rose: "Think that he may never have known a mother's love, or the comfort of a home." Narrator: "Ill-usage and blows, or the want of bread, may have driven him to herd with men who have forced him to guilt."
		Clear distinctions are made between the working and middle classes.	Narrator: "He shall be left to his fate." Narrator: "All the doubts that will be cast upon him."
C33-37	13.	Rose demonstrates her awareness of respectable society to assume the worst about individuals of low social standing.	Narrator: "He was still the same gentle, attached, affectionate creature." Narrator: "He was dependent for every slight attention and comfort on those who tended him."
		The importance of love and family values is reinforced.	Narrator: "The lady fell upon her knees, and tried to fold her hands together...she sank into the friendly arms which were extended to receive her."
C38-41	14.	Nancy's honourable act directly contradicts Victorian stereotypes of the poor as fundamentally immoral.	Nancy: "Isn't there anybody here... that will see a simple message, carried for a poor wretch like me?" Nancy: "If you knew what I am sometimes, you would pity me indeed." Nancy: "The truth, lady, though it comes from my lips."
C42-48	15.	Fagin continues to manipulate by using his power in a corrupt way.	Fagin: "You are as safe here as you could be." Narrator: "Observed Fagin pretending to ruminant." Fagin: "The gallows my dear is an ugly finger-post."
		Bill Sikes demonstrates paranoia and remorse for his actions.	Narrator: "A vision came before him, more terrible than from which he had escaped." Narrator: "Those widely staring eyes, so lustreless and so glassy."
C49-53	16.	Justice is served as Fagin and Sikes are punished for their corrupt actions.	Narrator: "There was a sudden jerk, and there he hung, with the open knife clutched in his hand."

10	Billion (1,000,000,000)	Hundred Million (100,000,000)	Ten Million (10,000,000)	Million (1,000,000)	Hundred Thousand (100,000)	Ten Thousand (10,000)	Thousand (1,000)	Hundred (100)	Ten (10)	Units (1)	Tenths (0.1)	Hundredths (0.01)	Thousandths (0.001)
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Place Value		
First comma	Thousands	1, 206, 000
Second comma	Millions	1, 206, 000 <i>1 million, two hundred and six thousand</i>
Ascending	Smallest to biggest	Write in descending order 4.403, 4.3, 4.33, 4.03
Descending	Biggest to smallest	U T H TH + . + 0 3 4 . 3 3 0 ← add place holders + . 3 0 0 4 . 0 3 0 ← line up the decimal point
The decimal point	Never moves	
Crocodile	Eats the bigger number	-2 > -7

Rounding and estimation		
Rounding	Find the decider	Round 58,624 to the nearest 100 58,624 ↓ 58,600 ← decider
And then	Is it strong or weak	

Addition and subtraction		
Product	Times	8 × 3
Sum	Add	8 + 3
Difference	Subtract	8 - 3
Integer	Whole number	Circle the integers below: -5, 2, 1/4, -3, 1.7, 56
Odd ends in	1, 3, 5, 7, 9	Write the largest even number using: 2, 3 and 7 732 ← must end with even
Even ends in	2, 4, 6, 8, or 0	

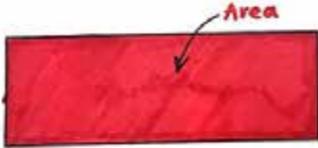
Multiplication		
Multiplying decimals	Gelasia	2.6 × 176 = Additional, point at end of integer.

Perimeter		
Perimeter is	The distance around a 2D shape	 p = 5 + 5 + 9 + 9

Squares		Square Roots	
1 ²	1	√1	1
2 ²	4	√4	2
3 ²	9	√9	3
4 ²	16	√16	4
5 ²	25	√25	5
6 ²	36	√36	6
7 ²	49	√49	7
8 ²	64	√64	8
9 ²	81	√81	9
10 ²	100	√100	10
11 ²	121	√121	11
12 ²	144	√144	12
13 ²	169	√169	13
14 ²	196	√196	14
15 ²	225	√225	15

Cube		Cube Root	
1 ³	1	√3	1
2 ³	8	√8	2
3 ³	27	√27	3
4 ³	64	√64	4
5 ³	125	√125	5
6 ³	216	√216	6
7 ³	343	√343	7
8 ³	512	√512	8
9 ³	729	√729	9
10 ³	1000	√1000	10

Factors, Multiples, Primes		
Prime numbers	Have exactly two factors	<p>Factors of 2: 1, 2 ✓</p> <p>Factors of 6: 1, 6, 2, 3 ✗</p>
Factors of a number	Go into a number	<p>F → 12 → M</p> <p>FACTORS: 1, 2, 3, 4, 6, 12</p> <p>MULTIPLES: 12, 24, 36, 48, ...</p>
Multiples of a number	Are the times tables	
Highest common factor	List the factors, circle the highest in both	<p>What is the HCF of 12 and 30?</p> <p>12: 1, 2, 3, 4, 6, 12</p> <p>30: 1, 2, 3, 5, 6, 10, 15, 30</p> <p>HCF = 6</p>
Lowest common multiple	List the times tables, circle the lowest in both	<p>What is the LCM of 2 and 5?</p> <p>2: 2, 4, 6, 8, 10, 12, ...</p> <p>5: 5, 10, 15, 20, 25, 30, ...</p> <p>LCM = 10</p>

Area		
Area is	The space inside a 2D shape	
Area of a rectangle	Length x Width OR Base x Height	<p>$A = b \times h$</p> <p>$A = 7 \times 7$</p> <p>$A =$</p> <p>$A = b \times h$</p> <p>$A = 12 \times 5$</p> <p>$A =$</p>
Area of a triangle	Base x Perpendicular Height	<p>$A = \frac{b \times ph}{2}$</p> <p>$A = \frac{8 \times 6}{2}$</p> <p>$A =$</p>
Area of a parallelogram	Base x Perpendicular Height	<p>$A = b \times ph$</p> <p>$A = 14 \times 9$</p> <p>$A =$</p>

Unit 1: Particles		
1	What is a particle?	An incredibly tiny part of matter
2	What is an atom?	A type of particle
3	What are the three states of matter?	Solids, liquids, gases
4	Draw a particle model for a solid	Should be at least nine particles, all same size, in ordered rows
5	Draw a particle model for a liquid	Should be at least nine particles, all same size, touching but not in an order
6	Draw a particle model for a gas	Should be at least three particles, all same size, not touching
7	What holds the particles in a solid together?	Strong forces of attraction
8	How do the particles in a solid move?	They vibrate around a point in space
9	Which state of matter can be compressed?	Gas
10	Why can't we compress solids and liquids?	Not enough space between the particles
11	Which states of matter can flow?	Liquids and gases
12	Why can't solids flow?	The force of attraction between particles is too strong
13	What is an area of high concentration?	Where there are lots of particles
14	What is an area of low concentration?	Where there are few particles
15	What is diffusion?	The movement of particles from an area of high concentration to an area of low concentration
16	What is kinetic theory?	That all particles are moving
17	Why is diffusion in solids very slow?	Because the particles don't move much
18	Why is diffusion in gases quick?	Because the particles are free to move
19	In which state of matter do the particles have the most energy?	Gases
20	How does increasing the temperature affect diffusion?	Speeds it up
21	Why is diffusion quicker in hotter substances?	Particles have more energy and move faster
22	What is a change of state?	When a substance goes from one state to another
23	What is the name for the process of solids turning to liquids?	Melting
24	What is the name for the process of liquids turning to gases?	Boiling (or evaporation)
25	What is the name for the process of gases turning to liquids?	Condensing

26	What is the name for the process of liquids turning to solids?	Freezing
27	What is the name for the process of solids turning to gases?	Sublimation
28	What happens to the size of an object when it is heated?	Increases
29	What is a melting point?	Temperature at which melting occurs
30	What is a boiling point?	Temperature at which boiling occurs
31	What is gas pressure?	The force caused by gas particles colliding with a container
32	In what three ways can you increase gas pressure?	Add more particles or make the container smaller or increase the temperature
33	Why does increasing temperature increase pressure?	Particles move faster so collide with the container more frequently
34	What is dissolving?	When a solute and a solvent form a solution
35	What is a solute?	The solid substance which dissolves
36	What is the solvent?	The liquid which the solute dissolves into
37	What is a solution?	The mixture containing the solvent and the solute
38	What is the conservation of mass?	That particles cannot be created or destroyed
39	What happens to the mass of a solvent when a solute is added?	It increases
40	What is a pure substance?	A substance with only one type of thing in it
41	What is a mixture?	When two or more substances are together but not chemically bonded
42	What is a separation technique?	A way of separating a mixture
43	What type of mixture can be separated by filtering?	Insoluble solid + liquid
44	What type of mixture can be separated by using a magnet?	One with a magnetic and a non-magnetic substance
45	What type of mixture can be separated by evaporation?	Dissolved solute + solvent
46	What type of mixture can be separated by distillation?	Two different liquids
47	What can we use paper chromatography for?	Separating colours in ink
48	In paper chromatography what is the stationary phase?	The paper
49	In paper chromatography what is the mobile phase?	Usually water
50	What is solubility?	How easily a solute dissolves
51	What is a saturated solution?	One in which more solute cannot dissolve
52	What is the effect of increasing the temperature on solubility?	Increases it
53	Why does increasing temperature increase solubility?	Particles have more energy so easier to break apart from each other

Unit 2: How Science Works Introduction

54	What are the three types of variable?	Dependent, independent, controlled
55	What is the dependent variable?	The thing you measure
56	What is the independent variable?	The thing you change
57	What is a controlled variable?	Something that is kept the same
58	What is a fair test?	An experiment where all variables are controlled other than the independent one
59	Why are fair tests important?	So you know why your dependent variable is changing

Unit 3: Cells

60	Name the parts of a microscope	Eye piece, objective lens, stage, lamp, focusing knob
61	What does focus mean?	Making an image sharp enough to be viewed
62	How do you focus an image using microscope?	By turning the focusing knob
63	How do you record an image from a microscope?	Draw what can be seen through the eyepiece
64	What does Magnification mean?	Increasing the size of an image
65	How do you work out a microscope's total magnification?	Eye-piece magnification x objective magnification
66	What is the "actual size" of an object?	How big it really is
67	What is the "image size" of an object?	How big it looks to you
68	How do you work out the image size of an object?	Magnification x actual size
69	What is an organism?	A living thing
70	What is a cell?	Cells are the basic building blocks of all living organisms
71	What is an organelle?	A small part of the cell
72	What is the function of the nucleus?	Controls the activities of the cell
73	What is the function of the cell membrane?	Controls what enters and leaves the cell
74	What is the function of the cytoplasm?	Where the chemical reactions take place
75	What is the function of the mitochondria?	Where respiration takes place
76	What is respiration?	How energy is released from glucose
77	What is the function of the ribosomes?	Where protein synthesis takes place

78	What is the function of the cell wall?	It strengthens the cell
79	What is the function of the permanent vacuole?	It keeps the cell rigid
80	What is the function of the chloroplasts?	Where photosynthesis takes place
81	What is photosynthesis?	How plants use light to make glucose
82	What are the key structural differences between an animal cell and a plant cell?	Plant has cell wall, chloroplast and vacuole, which the animal cell does not
83	What is a unicellular organism?	A living thing with only one cell
84	Give an example of a unicellular organism	Bacteria (or protozoa, euglena, unicellular fungi)
85	What is a flagellum and what is its function?	A tail-like structure that allows for movement
86	What is reproduction?	When an organism makes new organisms
87	Through what process do unicellular organisms reproduce?	Binary fission
88	How do cells do binary fission?	Copy their DNA and then divide in two
89	In cells, what three factors affect diffusion?	Concentration gradient, temperature, surface area of cell membrane
90	What is concentration gradient?	The size of the difference in concentration between two areas
91	How does concentration gradient affect rate of diffusion?	The greater the concentration gradient, the greater the rate of diffusion
92	How does temperature affect the rate of diffusion?	Increase temperature, increase rate of diffusion
93	What is the surface area of a cell membrane?	The size of the surface of the cell membrane
94	How does surface area of cell membrane affect the rate of diffusion?	The greater the surface area of the cell membrane the greater the rate of diffusion
95	What are the Principles of Organisation of living things?	Cells < Tissues < Organs < Organ Systems
96	What is a 'tissue'?	A tissue is a group of cells with a similar structure and function
97	What is an organ?	Organs are groups of tissues performing specific functions
98	How do organs make up organisms?	Organs are organised into organ systems, which work together to form organisms
99	What is a specialised cell?	A cell which has a specific function (job)
100	Give three examples of specialised cells in animals	Red Blood Cell, Nerve Cell, Muscle Cell
101	Give two examples of specialised cells in plants	Root Hair Cell, Palisade Cell
102	What is the function of a nerve cell?	Transmit (send and receive) electrical signals around the body
103	What are the three key structural features of a Nerve Cell?	Very long, lots of connections, insulation around it
104	How does a nerve cell's insulation support its function?	To help it keep electrical signals travelling quickly

105	How does a nerve cell's length support its function?	Allows electrical signals to be transmitted over long distances
106	How does a nerve cell's many connections support its function?	To transmit signals to lots of other nerve cells
107	What is the function of a muscle cell?	To contract
108	What are the two key structural features of a Muscle Cell?	Lots of mitochondria, connect well with each other
109	How do the amount of mitochondria in a muscle cell support its function?	Many mitochondria for energy release
110	Why is it important muscle cells connect well with each other?	It allows them to work together
111	What is the function of a red blood cell?	Transport oxygen round the body
112	What is surface area?	The size of the surface that is exposed to the surroundings
113	In a cell, what are the effects of large surface area?	Substances can enter and leave the cell more quickly
114	What are the three key structural features of a Red Blood Cell?	Biconcave shape, no nucleus, lots of haemoglobin
115	How does the shape of the Red Blood Cell support its function?	Biconcave shape, maximises surface area
116	How does Haemoglobin support the role of the Red Blood Cell?	Haemoglobin carries oxygen
117	Why does a Red Blood Cell not have a nucleus?	To maximise space for haemoglobin
118	What are the three key structural features of a Root Hair Cell which enable the cell to carry out its specialised function?	Large Surface area, long extension, no chloroplast
119	How does a Root Hair Cell's surface area support its function?	Large surface area means it can absorb substances quickly
120	What feature of a typical plant cell will we NOT find in a Root Hair Cell?	Chloroplasts
121	Why does the Root Hair Cell not contain chloroplasts?	It does not photosynthesise (No light underground)
122	How does the structure of the root hair cell support its function?	Large Surface area to absorb water, no chloroplasts as there is no light underground (no photosynthesis)
123	What are the two key structural features of a Palisade Cell which enable the cell to carry out its specialised function?	Lots of chloroplasts, at the top of the leaf
124	Why are Palisade Cells found at the top of the leaf?	So they can absorb as much light as possible (for photosynthesis)
125	Why do Palisade Cells contain many chloroplasts?	To absorb as much light as possible
126	Where in the leaf are palisade cells found?	At the top of the leaf
127	What is digestion?	Breaking down food into small molecules
128	What is the organ system responsible for breaking down food?	The digestive system
129	What happens to the small molecules at the end of digestion?	They are absorbed into the blood
130	Name the organs in the digestive system in the order food passes through them	Mouth, oesophagus, stomach, small intestine, large intestine, anus
131	Where is food digested?	The mouth, the stomach and the small intestine
132	What happens in the small intestine?	Digested food is absorbed into the bloodstream
133	What happens in the large intestine?	Excess water is absorbed (from undigested food)
134	Why does food need to be digested?	So that it can be absorbed
135	Which system is responsible for gases entering and leaving the body?	The respiratory system

1. Dans la salle de classe

regardez (look) écrivez (write) écoutez (listen) répétez (repeat) ouvrez vos cahiers (open your books) fermez vos cahiers (close your books) asseyez-vous (sit down) levez-vous (stand up) prenez le stylo violet (take out your purple pen) prenez le petit tableau blanc (take out your mini whiteboard) rangez vos affaires (pack away)	
Je peux (can I/ I can?)	aller aux toilettes ? (go to the toilet) enlever mon blazer ? (take off my blazer) emprunter un stylo ? (borrow a pen) ouvrir la fenêtre (open the window) fermer la fenêtre (close the window) utiliser un dictionnaire (use a dictionary)

2. Les salutations

Bonjour (hello) Salut (hi) Bonsoir (good evening) Bonne nuit (good night) Au revoir (goodbye) A toute à l'heure (see you soon) A bientôt (see you soon)	C'est (it's)	lundi (Monday) mardi (Tuesday) mercredi (Wednesday) jeudi (Thursday) vendredi (Friday) samedi (Saturday) dimanche (Sunday)
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French
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3. Je me présente

Comment tu t'appelles (what's your name ?)	Je m'appelle... (My name is...)
Quel âge as-tu ? (how old are you ?)	J'ai onze ans (I am eleven years old)
Où habites-tu ? (where do you live ?)	J'habite à Barnet (I live in Barnet)
Comment ça va ? (how are you ?)	Très bien (very good) Bien (good) Pas mal (not bad) Mal (bad) Très mal/pas bien (very bad/not good)
Quelle est la date de ton anniversaire ? (when is your birthday ?)	Mon anniversaire, c'est le 3 janvier – (My birthday is on 3rd January) février (February) mars (March) avril (April) mai (May) juin (June) juillet (July) août (August) septembre (September) octobre (October) novembre (November) décembre (December)

4. Qu'est que tu aimes faire et n'aimes pas faire ?

J'adore – I love J'aime bien (I really like) J'aime (I like) Je préfère (I prefer) Je n'aime pas (I don't like) Je déteste (I hate)	faire (to do) jouer (to play) jouer/envoyer (to send) regarder (to watch) écouter (to listen to)	de la natation (swimming) aux jeux vidéo (video games) de la guitare (guitar) des textos (texts) un match de foot (a football match) de la musique (music)
parce que c'est (because it is)	amusant (fun) ennuyeux (boring) passionnant (exciting) nul (rubbish) relaxant (relaxing)	

5. Parle-moi de ta famille

Ma mère (my mum) Mon père (my dad) Mon frère (my brother) Ma sœur (my sister) Mon/ma cousin(e) (my cousin) Mon grand-père (my grandfather) Ma grand-mère (my grandmother)	s'appelle (is called) a... ans (is ... years old)	Mes parents (my parents) Mes grands-parents (my grandparents)
s'appellent (are called) ont ... ans (are... years old)	son anniversaire (his/her birthday)	c'est le cinq mai (is the fifth of May)

6. Décris les cheveux et les yeux

J'ai (I have) Il a/elle a (he has/she has)	les cheveux (hair)	bruns (brown) châtains (chestnut) blonds (blond) roux (red) noirs (black) blancs (white) gris (grey)
J'ai (I have) Il a/elle a (he has/she has)	les yeux (eyes)	longs (long) mi-longs (mid-length) courts (short) raides (straight) frisés (frizzy) bouclés (curly) ondulés (wavy)
J'ai (I have) Il a/elle a (he has/she has)	les yeux (eyes)	marron (brown) verts (green) bleus (blue) gris (grey)

7. Décris ton apparence/Décris l'apparence de ta famille

J'ai (I have) Il a/elle a (he has/she has)	une barbe (a beard) les taches de rousseur (freckles) une moustache (a moustache)
Je porte (I wear) Il porte/elle porte (he wears/she wears)	des lunettes (glasses) des lentilles de contact (contact lenses)
Je suis (I am) Il est/elle est (he is/she is)	grand/grande (tall) petit/petite (short) mince (thin) gros/grosse (fat) beau/belle (beautiful)

8. Décris ton caractère/le caractère d'un membre de ta famille

Je suis Il est/elle est (he is/she is)	un peu (a bit) assez (quite) très (very) trop (too)	timide (shy) sympa (nice) bavard/bavarde (chatty) intelligent/intelligente (intelligent) actif/active (active) gentil/gentille (kind) travailleur/travailleuse (hardworking) courageux/courageuse (brave) généreux/ généreuse (generous)
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9. As-tu un animal de compagnie?

J'ai (I have) Il a/elle a (he has/she has) J'avais (I used to have) Il avait/elle avait (he used to have/she used to have) Je voudrais avoir (I would like to have) Il voudrait avoir/Elle voudrait avoir (he would like to have/she would like to have)	un cheval (a horse) un lapin (a rabbit) un chien (a dog) un chat (a cat) un poisson (a fish) un oiseau (a bird) un souris (a mouse) un cochon d'Inde (guinea pig) un hamster (a hamster) un rat (a rat) une araignée (a spider) une tortue (a tortoise)	blanc(s) (white) noir(s) (black) rouge(s) (red) marron (brown) jaune(s) (yellow) vert(s) (green) orange(s) (orange) tigré(s) (striped) noire(s) (black) marron (brown) verte(s) (green)
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10. Que temps fait-il ?

Il fait	beau (it's sunny) chaud (it's hot) froid (it's cold) mauvais (it's bad weather) gris (it's grey/cloudy)
Il	pleut (it's raining) neige (it's snowing)
Il y a	du vent (it's windy) de l'orage (it's stormy) du brouillard (it's foggy)

French
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1. Los saludos (Greetings)

¡Hola ! (hello/hi)
 Buenos días (good morning)
 Buenas tardes (good afternoon)
 Bonne nuit (good evening/ night)
 Adiós (goodbye)
 Hasta pronto (see you soon)
 Hasta luego (see you later)

2. Me presento (Introductions)

¿Cómo te llamas? (what's your name ?)	Me llamo... (My name is...)
¿Cuántos años tienes? (how old are you ?)	Tengo once años (I am eleven years old)
¿Dónde vives? (where do you live ?)	Vivo en Barnet (I live in Barnet)
¿Qué tal ? (how are you ?)	Muy bien (very good) Bien (good) Regular (not bad/ ok) Mal (bad) Muy mal (very bad) Fatal (awful/ terrible)
¿Cuándo es tu cumpleaños ? (when is your birthday ?)	Mi cumpleaños es el tres de enero – (My birthday is on 3rd January) febrero (February) marzo (March) abril (April) mayo (May) junio (June) julio (July) agosto (August) septiembre (September) octubre (October) noviembre (November) diciembre (December)

Spanish
1 of 2

3. En clase- las instrucciones (Instructions)

Mirad (look)
 Escribid (write)
 Escuchad (listen)
 Repetid (repeat)
 Abrid los cuadernos (open your books)
 Cerrad los cuadernos (close your books)
 Sentaos (sit down)
 Levantaos (stand up)
 Corregid con los bolígrafos morados (correct with your purple pen)
 Sacad las pizarras blancas (take out your mini white board)
 Recoged las cosas (pack away)

¿Puedo (can I/ can I?)	¿Podría (may I?)	ir a los servicios ? (go to the toilet) quitar mi blázer ? (take off my blazer) prestar un bolígrafo? (borrow a pen) abrir la ventana? (open the window) cerrar la ventana? (close the window) usar un diccionario? (use a dictionary)
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4. Los días (The days)

Hoy es (today is)	lunes (Monday) martes (Tuesday) miércoles (Wednesday) jueves (Thursday) viernes (Friday) sábado (Saturday) domingo (Sunday)
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5. ¿Qué te gusta hacer?/ ¿Qué no te gusta hacer? (What do you like/dislike doing ?)

Me encanta – I love Me gusta mucho (I really like) Me gusta (I like) Prefiero (I prefer) No me gusta (I don't like) Detesto/Odio (I hate)	hacer (to do) jugar (to play sports/games) tocar (to play instruments) mandar (to send) ver (to watch/see) escuchar (to listen to)
natación (swimming) videojuegos (video games) la guitarra (guitar) textos (texts) un partido de fútbol (a football match) música (music)	

6. Háblame de tu familia.

Mi madre (my mum) Mi padre (my dad) Mi hermano (my brother) Mi hermana (my sister) Mi primo/a (my cousin) Mi abuelo (my grandfather) Mi abuela (my grandmother)	se llama (is called) tiene... años (is ... years old)
Mis padres- my parents Mis abuelos (my grandparents)	se llaman (are called) tienen ... años (are... years old)
Su cumpleaños (his/her birthday)	es el dos de mayo (is the second of May)

7. Describe el pelo y los ojos

Tengo (I have) Tiene (he has/ she has)	el pelo	castaño (brown hair) negro (black hair) rubio (blonde hair) pelirrojo (ginger/ red hair) largo (long hair) corto (short hair) mediano (medium length) rizado (curly hair) liso (straight) ondulado (wavy) de puntas (spiky)
Tengo (I have) Tiene (he has/ she has)	los ojos	marrones (brown eyes) azules (blue eyes) grises (grey eyes) verdes (green eyes)

8. Describe tu apariencia/Describe un miembro de tu familia

Tengo (I have) Tiene (he has/ she has)	pecas (freckles) barba (a beard) bigote (moustache)
Llevo (I wear) Llevas (he wears/ she wears)	gafas (glasses) lentes de contacto (contact lenses)
Soy (I am) Es (he is/she is)	alto/alta (tall) bajo/baja (short) de talla mediana (medium height) delgado/delgada (slim) gordo/gorda (fat) guapo/guapa (good looking)

9. Describe tu personalidad. /Describe la personalidad de un miembro de tu familia

Soy (I am) Es (He is/she is)	un poco (a little) bastante (quite) muy (very) demasiado (too) tan (so)	gracioso/ graciosa (funny) activo/activa (active) simpático/simpática generoso/ generosa (generous) tímido/ tímida (shy) hablador/ habladora (chatty) trabajador/ trabajadora (hard working) inteligente (intelligent) valiente (brave)
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10. ¿Tienes animales ?

Tengo (I have) Tiene (he has/she has) No tengo (I do not have) No tiene (He/she does not have) Tenía (I/he/she used to have)	un caballo (a horse) un pájaro (a bird) un perro (a dog) un conejo (a rabbit) un gato (a cat) un pez (a fish) un ratón (a mouse)	blanco(s) (white) negro(s) (black) amarillo(s) (yellow) naranja(s) (orange) atigrado(s) (tabby) verde(s) (green) marrón/marrones (brown)
Me gustaría tener (I would like to have)	una rata (a rat) una araña (a spider) una tortuga (a tortoise) una cobaya (a guinea pig) una serpiente (a snake)	blanca(s) (white) negra(s) (black) amarilla(s) (yellow) naranja(s) (orange) atigrada(s) (tabby) verde(s) (green)
Le gustaría tener (he/she would like to have)		

Spanish
2 of 2

Background

1. Geography is the study of places and the relationships between people and their environments. (A)
2. Geographers use maps. World maps show the location of the continents and oceans. (B,C,D)
3. The UK is made up of four countries. Great Britain is England, Wales and Scotland only. (E)
4. Maps are made up of different parts; contour lines, symbols and information. (F, G, H)

A Types of Geography

Human	The study of humans and society
Physical	The study of the earth and its natural features
Environmental	The study of how humans and the natural earth interact together

B Continents



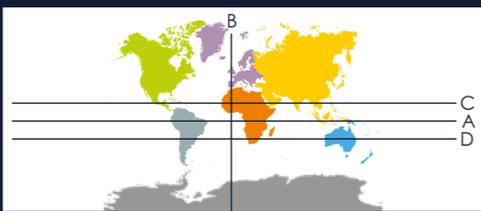
1. North America	5. Asia
2. South America	6. Oceania
3. Europe	7. Antarctica
4. Africa	

C Oceans



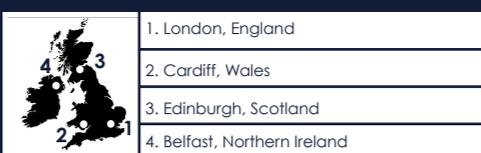
1. Arctic Ocean	4. Pacific Ocean
2. Atlantic Ocean	5. Southern Ocean
3. Indian Ocean	

D Lines on global maps



A. Equator	C. Tropic of Cancer
B. Prime Meridian	D. Tropic of Capricorn

E Geography of the UK



1. London, England
2. Cardiff, Wales
3. Edinburgh, Scotland
4. Belfast, Northern Ireland

F Contour Lines

a. Contour lines	Lines on a map joining points of equal height above sea level (altitude)	
b. Steep hills	Contour lines close together	
c. Sloping hills	Contour lines far apart	

G OS map symbols

Ordnance survey	The organisation that produces the maps that are most widely used in the UK.
	Bus station
	Railway (train) station
	Places of worship
	Information point (for help)
	Deciduous Trees
	Coniferous Trees
	Youth Hostel
	Museum
Sch	School
PO	Post Office
	View point
	Campsite

H Parts of a map

Latitude	Distance north or south of the equator
Longitude	Distance east or west a place of the Prime Meridian
Scale	The ratio of a distance on the map to the real distance on the ground
Compass	Used to show direction e.g. north, east, south and west

Rivers

Background

1. Rivers affect the landscape and the lives of people who live near them.
2. Rivers are found within their own drainage basin and have their own distinct features. (A)
3. As a river moves from its source in the upper course, to its mouth in the lower course, its profile changes. (B)
4. There are many different river processes which can impact the landscape. (C, D)
5. Processes of erosion and deposition can lead to the formation of different river landforms. (E, F, G)
6. Flooding is a key feature of rivers, and drainage basin processes play a significant role in this. By altering the drainage basin of a river, we can interfere with these processes. (H)
7. There are many famous examples of floods. Today many strategies have been put in place in an attempt to manage the flood risk. (I)

A Drainage basin features

Drainage basin	An area of land drained by a river and its tributaries
Source	The start of a river
Mouth	Where the river enters the sea or lake
Tributary	A small river that joins a larger river
Confluence	The point at which two or more rivers meet
Watershed	The dividing line between two drainage basins

B River profile

Upper course	The narrow, steep, upper part of a river, contains waterfalls.
Middle course	The wider, deeper channel, contains meanders and ox-bow lakes.
Lower course	The widest, flattest part of the river, near the mouth, contains the floodplain

C Types of erosion The wearing away of rock.

Hydraulic action	The force of the water breaks the rock particles away from the bed and banks
Abrasion	Material carried by the river scrapes and rubs along the bed and banks
Attrition	Eroded rocks hit into each other, breaking down into smaller pieces
Solution	The acids in the water dissolves rock

E Waterfall – upper course

Waterfall	A steep drop in the river caused by the erosion of soft rock undercutting hard rock
Plunge pool	A pool which forms at the bottom of a waterfall
Gorge	A steep sided valley left behind when a waterfall retreats up stream

F Meander (bend) – middle course

Slip off slope	The sloping bed on the inside bend of a meander, caused by deposition
River cliff	The steep undercut bank on the outside bend of a meander, caused by erosion

G Floodplain (flat areas of land that flood) – lower course

Silt	The fertile, eroded material in a river
Levees	Natural embankments (raised) found at the side of a river, caused by deposition

I Case study example: Boscastle

Where/when?	Cornwall in the south west of the UK, happened in August 2004. A tourist destination.	
	Cause	Effect
	<ol style="list-style-type: none"> 1. Very heavy rainfall, 89mm in just 1 hour. 2. Steep slopes of Bodmin Moor caused surface run-off. 3. Impermeable ground meant precipitation could not infiltrate. 	<ol style="list-style-type: none"> 1. 25 businesses ruined, costing £25 million in lost trade. 2. Four bridges destroyed. 3. Homes damaged costing £500 million to repair. 4. 75 cars washed away.
	Response	
	<ol style="list-style-type: none"> 1. Immediate - seven helicopters sent in to rescue people from the roofs of buildings. 2. Long term – river widened and deepened. 3. Long term - bridges made wider. 	

D Other river processes

River load	The material the river transports
Transportation	The movement of material by the river
Deposition	When a river loses energy so drops its load
Lateral erosion	When erosion widens the river valley, common in the middle and lower course
Vertical erosion	When erosion deepens the river valley, common in the upper course

H Drainage basin processes

Precipitation	Liquid that falls from the sky e.g. rain, snow, hail or sleet
Interception	When the leaves of trees stop precipitation reaching the ground
Surface run-off	The movement of water overland back into a river
Surface storage	Water stored on the surface in lakes or puddles
Infiltration	The movement of water from the surface into the soil
Through flow	The movement of water through the soil back into the river

Topic 1: World Views In 1000AD

Timeline

1. Emperor Constantine I agreed to the Edict of Milan. Christians would be accepted in the Roman Empire 313	3. The western Roman Empire fell but the Eastern Roman (Byzantine) Empire survived for another 1000 years c. 476	5. Muslim forces conquered Syria and also established control of Jerusalem 638	7. Ali ibn Abi Talib is assassinated leading to the split between Sunni and Shia Muslims 661	9. The Abbasid Caliphate came to power and made Baghdad the capital of the Islamic world 750	11. Baghdad was home to around 500,000 people and had running water, beautiful gardens and schools of law 1000
2. Emperor Constantine I died 337	4. The Prophet Muhammad died 632	6. Muslim forces conquered Persia 651	8. Muslim forces conquered Spain 711	10. The Islamic Empire extended from Spain to India 750	

Key people

12. Abbasids	Sunni rulers who ruled the Islamic world from Baghdad from 750
13. Ali ibn Abi Talib	Fourth caliph of the Islamic Empire
14. al-Ma'mun	Seventh Abbasid caliph who created the 'House of Wisdom' library in Baghdad
15. Emperor Constantine	Roman Emperor from 306-307 who is referred to as the 'First Christian Emperor'
16. Empress Zoe	Byzantine Empress from 1028-50
17. Prophet Muhammad	A merchant from Mecca who founded the Islamic religion
18. Umayyads	Sunni rulers who ruled the Islamic world from Damascus from 661-750

Key words

19. Baghdad	A city in Iraq that became an important centre of learning in the Islamic world.	25. Eastern Orthodox Church	Eastern form of Christianity, followed by the Byzantines
20. Byzantium	The Greek speaking Eastern Roman Empire.	26. Mecca	Birthplace of the Prophet Muhammad and one of Islam's most sacred places
21. Caliphate	An Islamic Empire, ruled by a religious leader known as a Caliph.	27. Pope	Leader of the Catholic Church, he lives in Rome and is believed to be God's representative on earth
22. Catholicism	One of the three major branches of Christianity, led from Rome by the Pope.	28. Shia	A smaller branch of Islam that believes Ali ibn Abi Talib was the rightful Caliph
23. Christendom	The parts of the world where Christianity is the most common religion.	29. Sunni	The largest branch of Islam that opposed Ali ibn Abi Talib as Caliph
24. Constantinople	The capital of the Byzantine Empire		

Topic 2: Norman Conquest

Timeline

1. Edward the Confessor died 5 Jan 1066	3. The Battle of Stamford Bridge Sept 1066	5. William I crowned King of England 25 Dec 1066	7. William the Conqueror invited Jewish migrants to settle in England 1070	9. Death of William the Conqueror 1088
2. Harold Godwinson was crowned King of England 6 Jan 1066	4. The Battle of Hastings Oct 1066	6. The Harrying of the North 1069	8. William the Conqueror commissioned the Domesday Book 1086	

Key people

10. Edward the Confessor	An Anglo-Saxon King of England whose death triggered the Norman invasion.
11. Harald Hardrada	A fierce Viking warrior, who made a claim for the English throne in 1066
12. Harold Godwinson	The last Anglo-Saxon King of England, who led the Saxons at the Battle of Hastings
13. William, Duke of Normandy	A French duke who conquered England in 1066

Key words

14. Baron	The highest rank of medieval society	18. Knight	Soldiers on horseback who belonged to the barons
15. Bishop	A senior person in the Church with authority over a large number of priests	19. Lord	Anyone higher up the feudal system
16. Domesday Book	A book commissioned by William to record who owned land and property in England	20. Motte-and-bailey castle	A castle built on a small hill with a courtyard
17. Feudal system	A system where all land belonged to the king but some was given to people below in exchange for service and loyalty	21. Peasant	A poor farm worker who does not own their land
		22. Vassal	Anyone who was below you in the feudal system

Topic 3: Religion In The Middle Ages

Timeline

1. Seljuk Turks seized control of Jerusalem 1079	3. Pope Urban II launches the First Crusade 1095	5. Crusaders captured Jerusalem, creating the Kingdom of Jerusalem 1099	7. Saladin captured Jerusalem 1187	9. The Fourth Crusade ended with the raid of Constantinople 1204	11. The last crusader state of Acre fell to Muslim invaders (the Mamluks) 1291
2. Pope Urban II became the Pope 1088	4. 100,000 people set off to the Holy Land to join the First Crusade 1096	6. The Second Crusade ended in defeat 1144	8. The Third Crusade ended with peace between Richard I and Saladin 1192	10. The 'Children's Crusade' left Europe for the Holy Land 1212	

Key people

12. Archbishop of Canterbury	The head of the Church in England, appointed by the King with the Pope's approval
13. Crusaders	Christians who fought in the Crusades
14. Saladin	Muslim warrior, who captured Jerusalem from the crusaders in 1187
15. Seljuk Turks	A Sunni Muslim tribe who conquered Jerusalem in 1079
16. Urban II	The Pope who began the First Crusade

Key words

17. Clergy	Everyone who works for the Church	22. Monastery	A building housing a religious community of monks and nuns who chose to live a life of religious service to the Church.
18. Crusade	A religiously inspired war, from the Latin 'crux' meaning 'cross'	23. Pilgrimage	A religious journey taken to a shrine or site of religious importance
19. Excommunication	A punishment from the Pope that banned somebody from being a member of the Catholic Church		
20. Heretic	Someone who challenged the beliefs of the Church	24. Priest	A man who worked for the small (parish) church in a town or village
21. Jerusalem	Historic city that is very important for Christians, Muslims and Jews	25. Purgatory	A place where people went after death to earn the right to go to heaven

Topic 4: Challenges To Medieval Monarchs

Timeline

1. Henry II accidentally ordered the murder of Thomas Becket 1170	3. King John murdered his nephew, Arthur 1202	5. King John refused to let Stephen Langton enter England 1205	7. The Pope excommunicated King John 1209	9. King John failed to win back Normandy at the Battle of Bouvines 1214	11. The barons invited Prince Louis of France to become King of England Nov 1215	13. Simon de Montfort, an English baron, set up the first Parliament 1265	15. The Peasants' Revolt occurred in England 1381
2. King John was crowned King of England 1199	4. King John lost Normandy 1204	6. The Pope passed an interdict on church services, marriages and burials in John's lands 1208	8. John imprisoned William de Braose's wife and son who starved to death 1210	10. The barons forced King John to sign the Magna Carta at Runnymede Jun 1215	12. John died and his son became King Henry III 1216	14. The Black Death (a deadly disease) arrived in England 1348	

Key people

16. Henry II	English king from 1154-89 who accidentally ordered the murder of his own Archbishop of Canterbury
17. King John	English king from 1199-1216 who was forced to sign Magna Carta.
18. Stephen Langton	Archbishop of Canterbury 1207-28
19. Thomas Becket	Archbishop of Canterbury 1162-70
20. Wat Tyler	Leader of the Peasants' Revolt

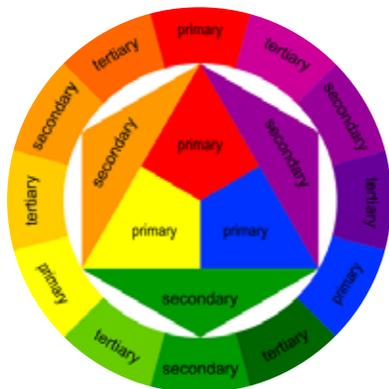
Key words

21. Interdict	A punishment from the Pope that bans certain church services	25. Rebellion	When people fight back against government or authority
22. Magna Carta	A document where King John agreed to give up some of his powers in 1215	26. Scutage	A tax on barons who did not provide knights to fight for the King
23. Papacy	The authority of the Pope and the Roman Catholic Church	27. Tax	Money that has to be paid to the government
24. Parliament	A collection of people representing all of a country who approve or refuse laws	28. Tyranny	Government where a single person rules absolutely and in a cruel way

The Elements of Art and Design

1. I will learn about the different Elements of Art
2. I will learn about colour theory
3. I will learn key words and facts about the Elements of Art and how artists use them

This is a colour wheel. It shows you how colours are mixed and how they relate to each other. The first circular diagram was designed by Sir Isaac Newton in 1666.



'I found I could say things with colour and shapes that I couldn't say any other way – things I had no words for.' Georgia O'Keeffe

COMPLEMENTARY COLOURS: Complementary colours are any 2 colours which are directly opposite on the colour wheel: Red and Green, Blue and Orange, Red/Purple and Yellow/Green are SOME of them. These 'opposite' colours create the biggest contrast. If you mix 2 complementary colours together and add white it makes grey. These greys are much more interesting than using black and white.

ANALOGOUS (OR HARMONIOUS) COLOURS: Harmonious or Analogous colours are ANY three colours that are side by side on the colour wheel. For example: yellow, yellow/orange and orange.

WARM + COOL COLOURS: Warm colours such as red, yellow and orange evoke warmth. They remind us of things like fire or the sun. **FACT:** They 'advance' space towards the eye. Cool colours such as blue, green and purple evoke a cool feeling. They remind us of water or grass. **FACT:** They 'recede' away from the eye.

BLACK: The colour black is NOT on the colour wheel. They are added to colour to create an INFINITE range of TONES – **FACT**

WHITE: White is added to the colours on the colour wheel. They create an INFINITE range of TINTS -**FACT**

The Elements of Art

Primary colours (First):

red, yellow, and blue are 3 primary colours.
FACT: They cannot be mixed from any other colours.

Secondary colours (Second):

Orange, green and purple are the 3 secondary colours.
FACT: They are made by mixing 2 primary colours in equal amounts.

Tertiary colours (Third):

Red + Yellow = Orange

Blue + Red = Purple (or Violet)

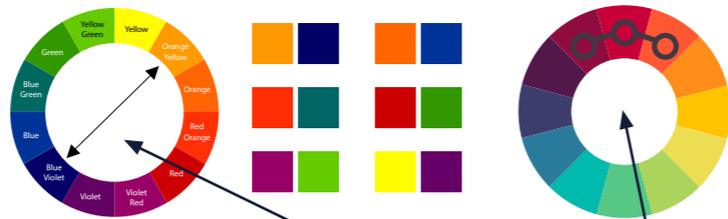
Yellow + Blue = Green

Tertiary colours are made by mixing a primary colour and secondary colour. Red (primary) + Purple (Violet) (secondary) = Red/Purple (Tertiary)

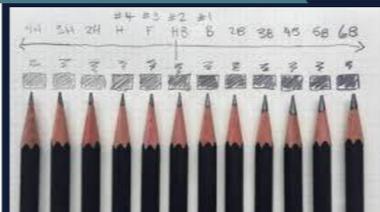
Blue (primary) + Green (secondary) = Blue/Green (Tertiary)

Yellow (primary) + Orange (secondary) = Yellow/Orange (Tertiary)

FACT: THERE ARE INFINITE TERTIARY COLOURS – HOW and WHY?



Art 2 of 2



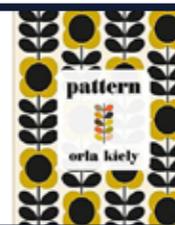
FACTS TO LEARN: This technique is called **TONAL VALUE**. The **HB** on your pencil stands for **HARD BLACK** – you can achieve several tones with this pencil depending on the level of pressure you use. Artists use softer pencils – from HB to 9B Architects use harder pencils – from 9H to H. This is because they need to make marks that do not smudge.

Learn the ELEMENTS OF ART – every artist uses them – so will you!

1. **COLOUR** - What you see when light reflect on something. Learn the mnemonic: **Richard Of York Gave Battle In Vain** as a way of remembering the colour order of the spectrum.
2. **LINE** - A mark which can be long, short, wiggly, or straight
3. **tone** - How light or dark something is
4. **TEXTURE** - How something looks or feels: rough or smooth
5. **PATTERN** - A symbol or shape that can be repeated
6. **SHAPE** - A 2D area that is enclosed by a line, regular or irregular
7. **FORM** - Something which has 3 dimensions, such as a sculpture



FACTS TO LEARN: Patterns are used in ALL form of design by artists. You will see patterns in fabrics, tiles, floor coverings, wall papers and even tattoos!



Vincent Van Gogh: 1853 – 1890 FACTS TO LEARN:

- He was a teacher in London
- He produced more than 200 paintings in less than 2 years
- He cut a large part of his ear off due to his mental instability
- He drew for a whole year before he started to paint on canvas
- He only sold one painting in his lifetime, to his brother Theo

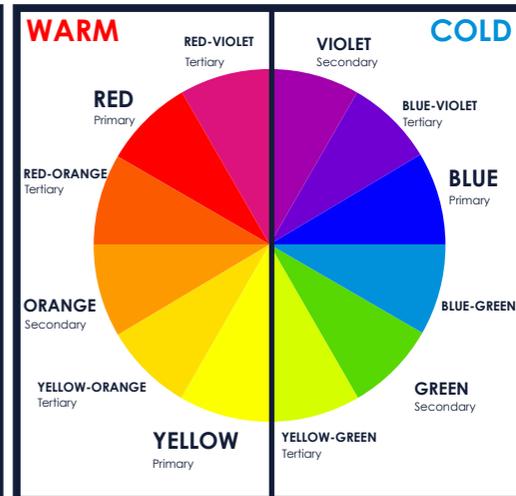


FACTS TO LEARN: The first **MOSAICS** were used over 4000 years ago in Mesopotamia to cover walls and floors for decoration and to keep areas cool.



FACTS TO LEARN:

- Ron Mueck is an Australian artist who worked in television and movies until he became a freelance artist in the early 1990s
- His first exhibition was in 1998
- His forms or sculptures are seen in galleries and the Millennium Dome
- His parents were puppeteers in Australian children's TV.



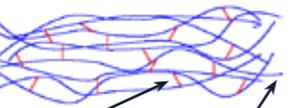
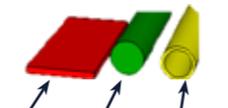
Illumination Rotation

Key Terms

Circuit	A path for electricity to flow from one point to another.
Current	A flow of electric charge in a circuit
Wire	Metal used to transfer current around a circuit.
Switch	Used to turn a circuit on or off / start or stop current flowing around a circuit.
LED	Light Emitting Diode – lights up when current flows
Battery	Supplies a current to the circuit
Soldering	A method of joining components in a circuit
Dry Joint	A solder joint which doesn't allow current to flow.
Polymer	Technical term for what we commonly call plastics
Molecule	A group of atoms bonded together
Polymer Chain	A chain of molecules found in all polymers
Thermoforming	A polymer which can be reheated and reformed repeatedly
Cross links	Connections between polymer chains
Thermosetting	A polymer which cannot be reheated and reformed
Raw material	The natural material from which a product is made
Extracting oil	Drilling into the earth to remove oil
Fractional distillation	Separating oil into different parts, including what is needed to make polymers
Moulding	Turning a polymer into a product shape
Stock Form	How we buy polymers/plastics to use to make products at school e.g. sheet, tubular, square profile
PVA	Glue used to join timber or paper/board together
Epoxy Resin	Glue used to join timber/metal/polymers together
Solvent Cement	Glue used to join polymers together
Contact Adhesive	Glue used to join timber/metal/polymers together
Form	The look of the product
Function	The way a product works
Form over function	The look of the product is more important than the way it works
Function over form	The way a product works is more important than the way it looks.

Design Technology 1 of 3

	Soldering Iron	To heat up a component leg to allow it to be joined to the circuit through solder .
	Side Cutters	To cut component legs or electrical wire.
	Long Nose Pliers	To move or hold components in place when soldering.
	Strip Heater	To heat polymers to allow them to be bent into shape .
	Laser Cutter	To cut a shape out of a material following the design created on 2d design.

Polymer Structure (Thermosetting)  Cross link Polymer Chain	Stock Form  Sheet Round Tubular		
Polymer extraction 			
Drilling for oil	Delivery to factory	Fractional Distillation	Moulding

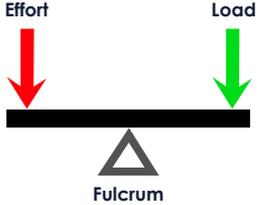
Projectile Rotation

Key Terms

Health and Safety	A set of rules and regulations enforced to keep people safe in the chosen environment.
Hazard	A risk of harm or injury.
Precaution	A measure taken to minimise the chance of harm or injury.
Lever	A way to gain mechanical advantage (MA) , making lifting or moving something much easier.
1st class lever	A lever where the fulcrum is in the middle.
2nd class lever	A lever where the load is in the middle.
3rd class lever	A lever where the force is in the middle.
Fulcrum	The pivot point for the lever.
Isometric projection	A sketching technique to create 3 dimensional drawings.
Plan View	A view of a product from above (2 dimensional).
Side View	A view of a product from one side (2 dimensional).
Housing joint	A joint where material is removed from only one piece of wood.
Lap joint	A joint where material is removed from both pieces of wood to form a right-angled corner.
Half lap joint	A joint where material is removed from only one piece of wood to form a right-angled corner.
Deciduous	Trees that shed their leaves annually .
Hardwood	Timber that comes from a deciduous tree.
Examples	Oak, Mahogany, Teak, Balsa.
Coniferous	Trees that do not shed their leaves.
Softwood	Timber that comes from a coniferous tree.
Examples	Pine, Ash, Birch, Cedar.
Manufactured Boards	Timber sheets which are produced by gluing wood layers and wood fibres together.
Examples	MDF (medium density fibreboard), plywood, chipboard.
ACCESSFM	A framework used for evaluation of products.

Design Technology 2 of 3

	Tenon Saw	Cuts straight lines in wood.
	Coping Saw	Cuts curves in wood and plastic.
	Try Square	Measuring and marking right angles.
	Fret Saw	Cutting curves in wood and plastic.
	Belt Sander	Removes excess material from wood or plastic.

Access FM	Levers
A – aesthetics	 Effort Load Fulcrum
C – cost	
C – customer	
E – environment	
S – size	
S – safety	
F – function	
M – materials	

Key Skills	
Fruits and vegetables	1st and largest food group. All fruits and vegetables – doesn't include potatoes. This is the one we should have the most of.
Carbohydrates	2nd largest food group has two main categories: Starchy are slow-release energy – foods like porridge. Sugary are fast-release energy – foods such as white rice
Fast-release	A carbohydrate that digests quickly and releases energy quickly, giving the body short bursts of energy.
Slow-release	A carbohydrate that digests slowly and releases energy slowly, meaning it lasts longer in the body.
Protein	3rd largest food group. All forms of meat. Includes eggs and other animal products – bacon and sausages.
Dairy and alternatives	4th largest food group. Cheese, milk, cream from animals. Alternatives are options that are made from plant products as opposed to animal products, such as soya milk.
Fats and spreads	5th and last food group – Olive oil, margarine, for example, are in this group.
Macronutrients	The main and biggest (macro = big) nutrients we need each day in order for our bodies to function.
Carbohydrates - macronutrient	Its main function is to give us energy to perform daily activities.
Proteins - macronutrient	A macronutrient. Its main function is to help the body build muscles and repair body cells.
Fats - macronutrient	A macronutrient. Its main function is to help protect organs from damage by providing a cushion.
Food Assurance	Red Tractor and Red Lion logos – guarantees that the meats and plant foods have met a certain quality standard.
Food Safety	Part of food assurance. Checks carried out to ensure the product is safe to eat.
Traceability	Part of food assurance. The food product is marked to make sure it can be found at any during growing to processing
Animal Welfare	Part of food assurance. Making sure the animals are treated properly.
Environment	Part of food assurance. Making sure that the environment is protected by farmers.

Design Technology
3 of 3

	Hob	Used for frying, boiling or other types of cooking using a saucepan. Top of the oven.
	Grill	The top section of the oven (if it's a double oven).
	Tea Towel	Used for drying equipment.
	Washing up bowl	Filled with hot water to wash equipment.
	Knife	Paring knife – small knife used to generally cut veg and meat.
	Chopping boards	Used to cut food product on to protect work surface. Red for meat, white for veg.

Macronutrients		
		
Protein	Carbohydrates	Fats
Food Assurance		
	Red Lion – eggs	
		Red Tractor – meat and plant-based foods

The Terrible Fate of Humpty Dumpty by David Calcutt (2012)

1. Plot - Victimised by Stubbs and his gang, Terry Dumpton, nicknamed Humpty Dumpty, resorts to truancy to avoid his bullies. Following pressure from his tormentors to prove he isn't a coward, Terry takes part in a dangerous activity resulting in a fatal outcome.			
2. Structure - The play starts at the end and uses flashbacks to show the events that lead to the death of Terry.			
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.			
Question areas	Context/social/cultural/historical context; aspects of the character; actors' movement and voice; Set design;		
Key words for question areas	4. Context/social/cultural/historical; Date-Place-Issue		
Social/cultural/Historical context	5. The Terrible Fate of Humpty Dumpty context - The play was written and is set in contemporary times, David Calcutt wrote the play in 2012 and explores the contemporary issue of bullying in the British culture. The audience see how bullying affects not just the victim but his friends and family and even, sometimes, the bullies themselves. The play also explores gangs within modern British culture.		
6. Status (How much power and control a character has in the scene/play) - Key characters – Key lines and stage directions that impact on the character			
High status	7. Stubbs- Leader of the gang. The antagonist (protagonist's enemy) (There is a pause. Then Stubbs says) ...All right, Humpty? Up you go. Get Pete's Frisbee back for him... (There is tension. Then Stubbs continues)		
	8. Pete – Gang member – the joker (On waste ground. Stubbs, with the members of his gang Jimmy, Pete, Kathy, Kay, Janet and Tracey - are surrounding Terry Dumpton. Sammy stands to one side...) See my Frisbee, Humpty? My best frisbee, this is. I've had this frisbee for ages. I love it. I'd hate to lose it.		
	9. Kathy – Gang member You wanna go up there instead? (There is a pause)		
Low status	10. Terry- The Protagonist (leading character) Victim of the gang (He –Stubbs- walks towards Terry) All right I'll get it		
	11. Sammy – Gang member (follower) and Terry's only friend Terry starts to climb the pylon. Egged on by Pete, the members of the gang start to chant 'Humpty Dumpty!' over and over again, and then shout comments up at Terry. Sammy runs forward.) Don't Terry. Come down		
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	13. Pace - fast or slow 14. Gesture - a movement of part of the body, especially a hand or the head, to express an idea or meaning 15. Gait - walk 16. Posture - the position in which someone holds their body 17. Facial expression - usually links to an emotion. Tells the audience the character's feelings and what they are thinking		
	Voice	18. Pace - fast or slow 19. Pause - An actor stops talking for a moment/beat during a line. 20. Pitch - high or low 21. Tone - reveals an emotion i.e. angry, scared 22. Volume - loud or quiet 23. Accent - shows where someone is from or gives clues as to their upbringing	
		Staging the Performance	
		24. End-on performance space	One audience side. This performance space is similar to a proscenium arch stage. The stage is at one end and the audience face it directly. In this type of stage there is no arch around the edge of the stage to 'frame' it
25. Blocking		Planning the space and the actor's movement	
26. Set design		What the stage looks like and the furniture. As a set designer you will need to consider the practical aspects of set design. The play has lots of fast-paced scenes in various locations, the set design will need to be kept minimal to help with the quick changes	

Set design key words - The set should represent the context of the play.	
27. Themes/ symbols	The set design can also communicate abstract concepts, such as themes and symbols. As an example, a design could include a large, dead tree to suggest the themes of death in the play.
28. Style	Set design is also important in supporting the style of the production. For example, a play in a naturalistic style would aim to create the impression of reality through realistic-looking props and set items. A play performed in a minimalistic style would use just a few, simple props to represent a setting, such as a large, suspended window frame to suggest the performer is standing inside a grand manor house.
29. Colour	Colour can be used within set design to symbolise various ideas on stage. For example, the set designer for this play could include dull greys and a monochromatic palette (single colour) this could enhance the sad atmosphere and dark themes in the play.
30. Condition	The condition of a design can reveal important information about the setting or a character's circumstances. For example, shabby, ragged and decaying piles of rubbish might suggest that the area is run down and a waste ground.
31. Levels	A set designer can vary levels using a rostra, blocks, ramps and/or steps. Blocks, staging units, scaffolding and planks can be used to create levels and can be joined together to create steps or other shapes. Levels are often used in productions to portray a character's status, power or situation.
32. Projections	Projections- can be used to add detail and texture on stage. scenery can be projected, for example the pylon and the waste ground, the problem is that if the image is not projected behind the set, the actors will cast shadows onto it.
33. Position	Where you put the items of set on the stage. Use the correct language Upstage; downstage; centre stage; stage left; stage right; upstage centre; upstage left; upstage right, downstage centre; downstage left; downstage right.
34. Stage furniture	Items of set that can be moved on stage but are not props .
35. Stage flats	Short for scenery flat which is a flat piece of theatrical scenery which is painted and positioned on stage so as to give the appearance of buildings or other background.
36. Cyclorama	A large curtain or wall, often concave, positioned at the back of the stage (Upstage). It often encircles or partially encloses the stage.
37. Backdrop	The background image, behind the set, on the back wall of the stage. This can set the imaginary location for the scene.
38. Location	The set can tell the audience where and when the scene takes place.
39. Symbolism	Items and actions on stage that represents a message.

Music Theory		
Notes on the PIANO		
SHARPS	The key directly to the right of a note (i.e. higher on the piano).	Sharp symbol: #
FLATS	The key directly to the left of a note (i.e. lower than a note).	Flat symbol: b
REPEAT SYMBOL	A symbol which tells the performer to repeat a section of the music.	 : :
TREBLE CLEF	A musical symbol showing that notes are to be performed at a higher pitch . The melody part is often written in the treble clef .	
BASS CLEF	A musical symbol showing that notes are to be performed at a lower pitch . The bass line part is often written using the bass clef .	
Notes in the TREBLE CLEF	You can recall the notes of the lines of the treble clef by remembering: Every Good Boy Deserves Football . You can remember the spaces with the word FACE .	
Notes in the BASS CLEF	You can recall the notes of the lines of bass clef by remembering: Good Burritos Don't Fall Apart . You can remember the spaces with: All Cows Eat Grass .	

Key words and Definitions	
HOOK	The 'catchy bit' of the song that you will remember. It is often short and is repeated in different places throughout the piece. Hooks can be either melodic, rhythmic or verbal (in the lyrics).
RIFF	A repeated musical pattern in a pop or rock song. Riffs can be rhythmic or melodic .
OSTINATO	A repeated musical pattern in Classical music. Ostinatos can be rhythmic or melodic .
BASS LINE	The lowest pitched part of the music often played on bass instruments such as the bass guitar or double bass. Riffs and ostinatos are often used in bass lines .
MELODY	The main tune of a song or piece of music, played at a higher pitch than the bass line . It may also contain riffs or hooks . In Classical music the melody is sometimes performed with an ostinato pattern below.

Key words and Definitions	
<i>Bolero</i> by Ravel: Rhythmic ostinato	
<i>Sweet Dreams</i> by Eurythmics: Bass line riff	

Texture		
TEXTURE	How the different layers in a piece of music are arranged.	
MONOPHONY	One layer of music.	
ANTIPHONY	Call and response.	
HOMOPHONY	Many layers of music which move together. E.g. chordal music.	
POLYPHONY	Many layers of music which move independently. This means at different times, weaving in and out of each other.	

Who is God & What does God do?

Key words:

Omnibenevolent (all-loving)
Omnipotent (almighty/all-powerful)
Omniscient (all-knowing)
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 impersonal - we cannot understand or experience his presence in the world
Incorporeal Shapeless/bodiless/formless
Trinity: The Christian belief in one God made of 3 different persons
Allah - The name of the Muslim God
 Shirk
Adonai/Hashem/G-D: the name of the Jewish God
 Covenants
Trimurti: The 3 main images of God in Hinduism

Topics covered:

- | | | |
|---------------------------------|----------------------------|-----------------------------|
| 1. Generic Beliefs about God | 4. Islam – nature of God | 7. Judaism – role of God |
| 2. Christianity – nature of God | 5. Islam – Role of God | 8. Hinduism – nature of God |
| 3. Christianity – role of God | 6. Judaism – nature of God | 9. Hinduism – role of God |

1. Generic beliefs about God

- **What is a theist?** Someone who believes in God
- **What do theists believe about God?** They generally believe that God is omnipotent, omnipresent, omniscient & omnibenevolent
- **Why do they believe this?** Religious scriptures support the idea of a God with all of these attributes
- **What do atheists believe?**
- They believe that God does not exist
- **Why do they believe this?** Because there is no convincing evidence of God's existence – we can't see God.

This God – his way is perfect; the word of the LORD proves true; he is a shield for all those who take refuge in him. Psalm 18:30 and to Allah belongs the dominion of the heavens and the earth, and Allah is over all things Competent. (Aal `Imran 3:189)

2. Christian beliefs about the nature of God

- **What is the trinity?** There is one God, in three different persons (The Father, The Son & the Holy Spirit). Each of these persons are fully God
- **How many Gods do Christians worship?** Christians are monotheists – they believe in 1 God
- **What do Christians believe that God is like?** Christians believe that God is omnipotent, omnipresent, omniscient and omnibenevolent. They believe that God is Perfect.
- **What evidence is there to prove this?**
- The bible has stories of God's perfection
- **This God – his way is perfect; the word of the LORD proves true; he is a shield for all those who take refuge in him. Psalm 18:30**

3 What is the role of the Christian God?

- God the Father – His role as Creator, Father and Judge "Have we not all one Father? Has not one God created us?" Malachi 2.10**
- **God the son** – Christians believe that Jesus is God in human form (incarnation). He had many roles on earth such as healer, redeemer, savior, guide – **Story of Jesus Healing the leper or resurrecting Jairus' daughter**
 - **God the Holy Spirit** – The immanent part of God that works in the world, offering guidance and comfort to those who need it and believe in God
For all who are led by the Spirit of God are sons of God.

4 The nature of Allah?

- **Who is Allah?** Allah is the main name given to the Muslim God
- **How many Gods do Muslims worship?** Muslims worship one God – this is known as Tawhid, the oneness of God.
- **What is Shirk?** Anything that goes against Tawhid is known as shirk. This is the act of believing in more than one God/comparing God to other things or drawing God. It is a crime to diminish the power and Glory of God in Islam
- **What else do Muslims believe about God?**
- Allah has no Children
- Allah Has 99 Names, His main name in Islam is Allah. His other names reveal certain aspects of his nature e.g. Creator, Merciful

Allah - there is no deity except Him, the Ever-Living, the Sustainer of [all] existence. Neither drowsiness overtakes Him nor sleep. To Him belongs whatever is in the heavens and whatever is on the earth. Quran Verse 2:255

5 The Role of Allah

- **What do Muslims believe Allah does?** Allah has many roles including as judge. Muslims believe that life is a test they must overcome and on judgement day Allah will decide who has passed the test and is going to heaven (Jannah) and Hell (Jahannam)
- **What else do Muslims believe Allah does?** A core belief Muslims have is that Allah created the world in 6 days

Allah will say, 'This day truthfulness shall benefit the truthful. For them there will be gardens with streams running in them, to remain in them forever. Allah is pleased with them and they are pleased with Him. (Chapter 5 Verse 119)

6. Judaism Nature of G-d

- **What do Jews believe about G-d?** There is one God who has several different names. Jews believe his name is so Holy they rarely say it, and instead refer to him as **Adonai (My Lord), Hashem (the name)** or write **G-d**
- **What else do Jews believe about G-d?** God created the universe in 6 days. God has made covenants (promises) with the Jewish people. God has given his people a law to live by (10 commandments)
- **How do Jews know about G-d?** The collection of Holy Books including the Torah teach Jews about the nature of God
- **This God—his way is perfect; the word of the LORD proves true; he is a shield for all those who take refuge in him. Psalm 18:30**

7. Judaism the role of G-d

What do Jews believe about the role of G-d?

- **God as savior** – Jewish people believe that G-d has saved them on many separate occasions e.g. from slavery in Egypt **[Story of Moses]**
- **God as creator** – built the world in 6 days and rested on the 7th **"And he said let there be light, and there was light"**
- **God as Judge** – God decides the fate of human beings **(story of Job and story of Moses)**

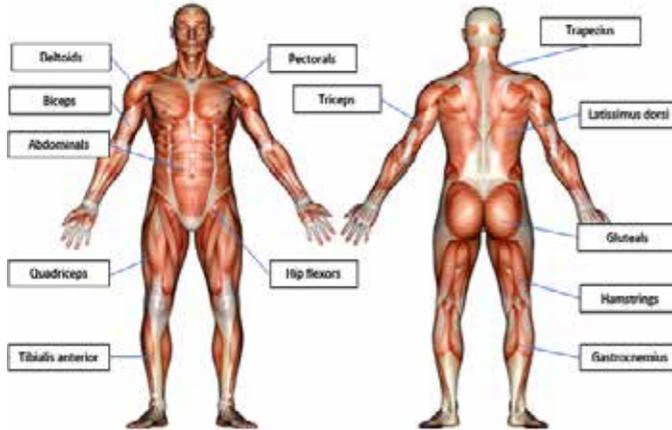
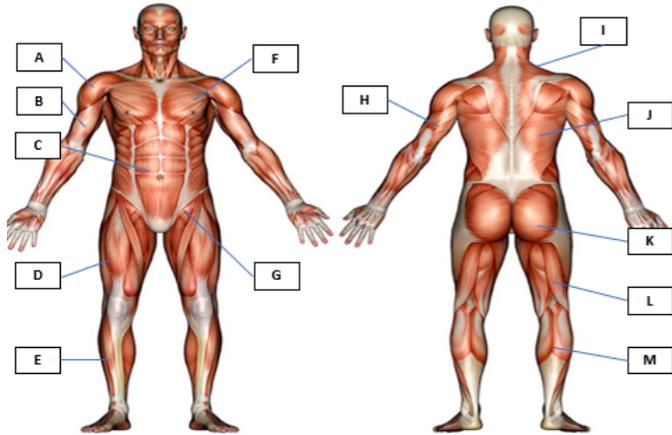
8. Hinduism the nature of God

- **How many Gods do Hindus believe in?** Hindus believe in **One God** – the supreme being called **Brahman**
- **What about the Gods and Goddesses?** Hindus have millions of Gods and Goddesses. Each God/Goddess have different roles and characteristics that help Hindus understand the different aspects of the one God, Brahman.
- **What is the trimurti?** the 3 main images of God, made up of Brahma (the creator), Vishnu (the preserver) and Shiva (the destroyer).

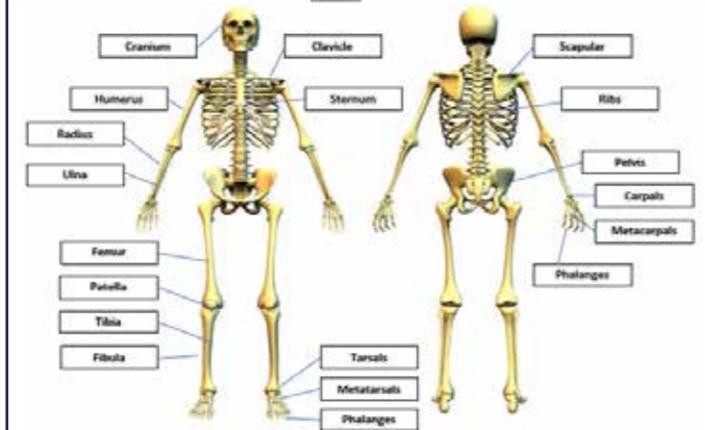
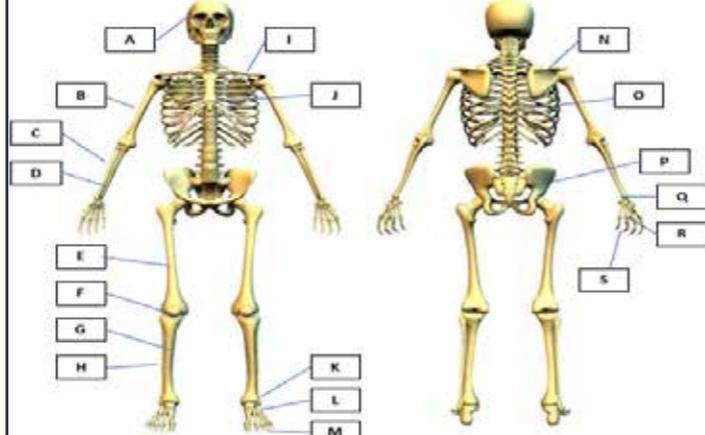
9. Hinduism the role of God

- **What does God/Brahman do ?** Hindus believe the God does everything, and there are different Gods and Goddesses for each of the things he does. For example, When God destroys things they call him Shiva. Hindus also believe that God created the universe through Brahma.
- **What else does God do?** One of the most important roles is for God to judge a person's actions at the end of their life-cycle and decide what they are reborn as – part of the cycle of **samsara** and **reincarnation**
- **What is the cycle of Samsara and reincarnation?** This is the cycle of birth, death and rebirth that Hindus believe every person is trapped in. When a person dies, Hindus believe that their body perishes and their soul is reborn in a new body. This is known as reincarnation

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



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



Identify four types of bones found in the skeletal system.

- Long bones
- Short bones
- Flat bones
- Irregular bones

Identify the main function of each type of bone from the list above.

- Long bones: Provide structure and large powerful movements
- Short bones: Provide stability and small controlled movements
- Flat bones: Provide protection of vital organs
- Irregular bones: Provide protection and a point of attachment for muscles

Identify examples of each type of bone.

- Long bones: Humerus, radius, femur and tibia
- Short bones: Carpals and tarsals
- Flat bones: Cranium, ribs and pelvis
- Irregular bones: Vertebrae

Identify three immediate effects of exercise.

Sweating, red face, increased body temperature, increased heart rate, increased breathing rate

Identify three short-term effects of exercise.

Fatigue, muscle soreness (DOMS), dizziness, nausea

Identify three long-term effects of exercise.

Lower resting heart rate, weight loss, increased muscle mass, increased strength, increased cardiovascular endurance

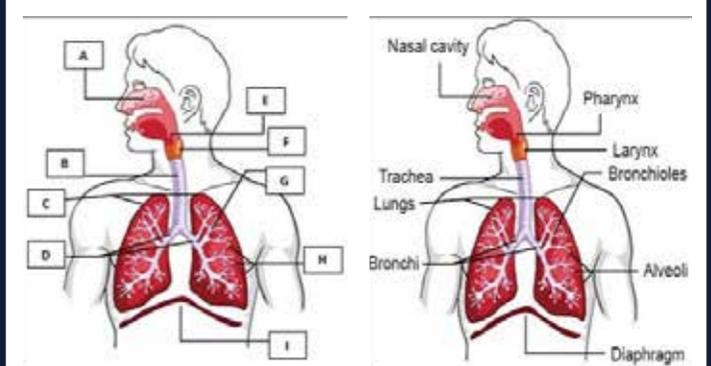
Which two gases are involved in the gaseous exchange?

Oxygen and carbon dioxide

Identify two places where gaseous exchange takes place.

Lungs (alveoli) and the working muscles

Identify parts A-I on the diagram of the respiratory system below.



Notes



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