Wadham School

A Church of England Community School

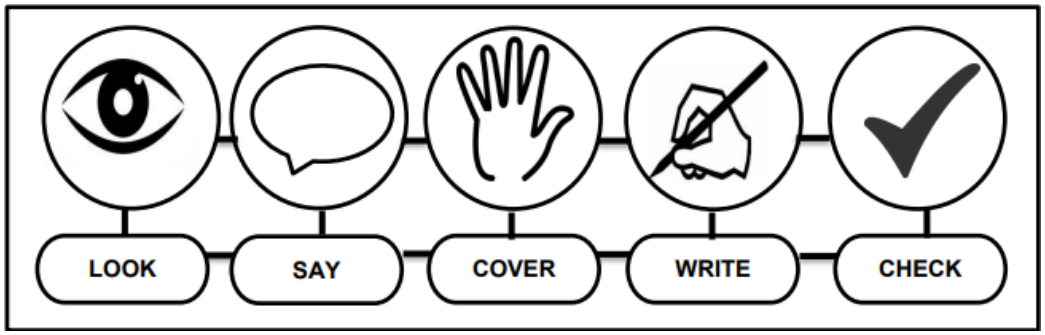
Knowledge Organisers
Year 8
Term 1 & 2
2025-2026

Name.....

Tutor group.....

"Life in all its fullness" John 10:10

Using Your Knowledge Organiser



Look-Say-Cover-Write-Check

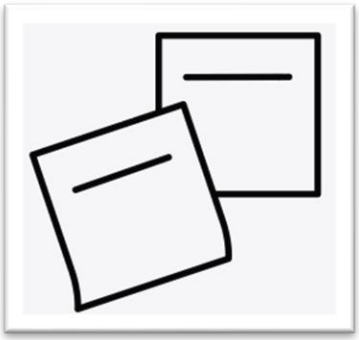
Retrieval practice using the look-say-cover-write-check technique, when done in regular small chunks, is one of the best ways you can learn relevant knowledge over time.

Working in Independent mode:

- Look at the first bullet point or sentence
- Read through it three to five times
- Cover
- Write it out exactly
- Remove and check what you wrote and tick if correct
- Repeat
- When you get it 100% right, move on to the next chunk of information

Flash Cards

Make flast cards with the definition on one side and key word on the other.

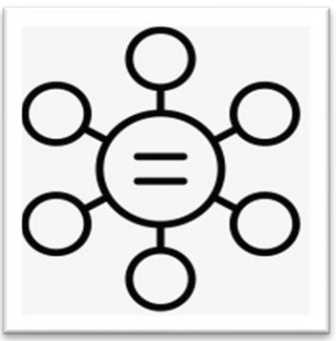


Self Quizing

Write quizzes with answers to test yourself in the future.

Mind maps

Create mindmaps linking key information you need to remember.



LIBRARY INFORMATION

Library Days

MON - MINDFULNESS & COLOURING

WED-YEAR 7 ONLY BOOK CLUB

FRI - PUZZLE CLUB & LEGO

BORROWING A BOOK

- YOU MAY BORROW ONE BOOK AT A TIME
- YOUR BOOK CAN BE RETURNED DURING SOCIAL TIME OR LIBRARY TUTOR TIME
- BOOKS CAN BE LEFT IN THE YELLOW BOX IF THERE ARE NO STAFF
- PLEASE MAKE SURE YOU RENEW YOUR BOOK EVERY TWO WEEKS IF YOU'RE NOT FINISHED YET!
- PLEASE LET MRS GEORGE KNOW IF A BOOK GETS LOST OF DAMAGED

IF YOU LOSE A BOOK, DONT PANIC! IT CAN BE REPLACED WITH ANOTHER BOOK OR WITH A SMALL CHARGE

ACCESSIT

DID YOU KNOW THE LIBRARY CATALOGUE CAN BE FOUND ONLINE? THERE IS A LINK ON THE DESKTOP OF ALL THE COMPUTERS AND ON TEAMS.
(THE LOG IN IS THE SAME AS YOUR SCHOOL EMAIL AND PASSWORD)

THE LIBRARY IS OPEN TO ALL.
IT IS A SPACE WHERE YOU WILL ALWAYS FIND AN ADULT AT BREAK OR LUNCH.
THERE ARE TABLETS IN THE LIBRARY THAT CAN BE USED FOR COMPLETION OF HOMEWORK, PLEASE ASK MRS GEORGE FOR ACCESS

ART

Everywhere we look we see patterns in the natural world. Some may be **irregular**, some **regular**. These patterns have inspired many contemporary artists, including Mark Hearld and Yellena James

Mark Hearld is a British artist who draws inspiration from the natural world around him. He creates art, prints and household items, such as ceramics. He has worked on film sets such as Nanny McPhee, producing interior sets with an english nature theme.

A repeating pattern by Mark Hearld.

Yellena James was born in Bosnia Herzegovina, and now lives in the US. Her work is inspired by underwater landscapes, and the colours and patterns created by the plants and creatures that live on the sea bed.

'Fathomless' by Yellena James

Types of pattern:

Tessellation

Repeating

Reflection (bilateral symmetry)

Rotational symmetry

Regular

Irregular

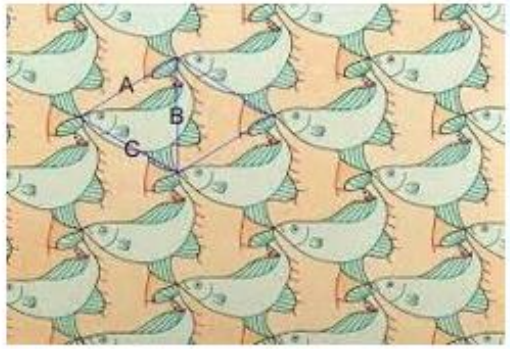
PATTERN IN NATURE

ART

William Morris (1834-96) was an artist and designer who reacted against the mass production of the industrial revolution. With a group of other designers, he founded the 'Arts and Crafts' movement, which placed emphasis on quality, design and craftsmanship of objects from furniture, cloth and wall paper, to architecture and art.

William Morris 'Strawberry thief' and 'vine'

M.C. Escher (1898-1972) was a Dutch graphic artist. He was interested in repeating and metamorphosing patterns, inspired by mathematical shapes and concepts. When you look at these, remember they were done some years before computer graphics!



Tessellations by M.C. Escher

PATTERN IN NATURE

Beliefs and Worldviews – Year 8 Term 1& 2

Topic 1: Judaism – Beliefs and Practices

1	1	**G_d**	Jews write G_d as a mark of respect towards G_d
	2	**Monotheism**	Jews believe there is only one G_d
	3	**Prophets**	G_d is revealed through the Prophets of the Torah (Abraham, Moses, David etc.)
2	4	**Torah**	First part of the Jewish bible
	5	**Hebrew**	Ancient language of the Jews – Torah is read in Hebrew
	6	**Yad**	Used as a pointer to show respect
	7	**Scribe**	Person who copies Torah by hand
3	8	**Shabbat**	Day of rest and reflection
	9	**Rest**	Refraining from anything considered work
	10	**Commandment**	God's rule to follow e.g. "Remember the Shabbat & keep it Holy'
4	11	**Bar/Bat Mitzvah**	Ceremony marking a young Jew becoming responsible
	12	**Rite of Passage**	Ceremony marking important life stages
5	13	**Hanukkah**	Festival remembering the recapturing of Jerusalem
	14	**Passover**	Festival remembering the liberation from Egypt
	15	**Menorah**	7 Branched candle lit during Hanukkah
	16	**Unleavened Bread**	Flat bread without yeast, eaten during passover
6	17	**Israel**	Nation of the Jewish people.
	18	**Holocaust**	Mass murder and genocide (attempt to exterminate) the Jewish people during WW2.
	19	**Anti-Semitism**	Persecution of Jews

Topic 2: Christian Beliefs and Practices

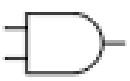
1	1	**Trinity**	One God in three persons: Father, Son & Holy Spirit
	2	**Father**	The creator aspect of God in heaven
	3	**Son**	Jesus the Incarnation of God on earth
	4	**Holy Spirit**	The person of God that connects to Christians through prayer
2	5	**Denomination**	Different group within Christianity
	6	**Interpretation**	Different way of reading & understanding the Bible
	7	**Roman Catholic**	Conservative denomination led by the Pope
	8	**Protestant**	Moderate denominations including Church of England
	9	**Quaker**	Liberal denomination with modern views
3	10	**Immanent**	Close to humans: Part of Space & Time
	11	**Worship**	Celebrating faith and expressing adoration for God
	12	**Liturgical**	Worship that follows a set structure
	13	**Charismatic**	Worship that is free and improvised
	14	**Eucharist**	Act of worship: sharing bread and wine in memory of Jesus
4	15	**Atonement**	Healing of the rift between God and humans
	16	**Salvation**	Being saved from the effects of sin and eath
	16	**Baptism**	Initiation into the church - symbolises cleansing of sin
5	17	**Revelation**	God showing himself & his plan to humans
	18	**Church**	Global Christian family – all believers worldwide
	19	**Evangelism**	Sharing the faith with the intention of converting others
	20	**Mission**	Serving the poor motivated by faith
6	21	**Lent**	Time or preparation for Easter – Give up something pleasurable
	22	**Advent**	Time of preparation for Christmas
	23	**Pentecost**	Commemorates the decent of the Holy Spirit

Computing

Computer	An electromechanical device which receives input, processes it and produces and output
Device	A piece of electrical or mechanical equipment made for a particular purpose
Program	A sequence of instructions written in a programming language that a computer can execute or interpret
Software	A set of programs used to operate computers and perform specific tasks
Hardware	The physical components of a computer
Processor	The part of the computer that interprets and carries out instructions
Main memory	The part of the computer that stores data that is currently being used by the processor
Operating system	Specialised software that communicates with computer hardware to allow other programs to run
Binary	The binary number system is a base-2 numeral system that uses only two symbols, 0 and 1, to represent all numbers. In computers, it's the fundamental language for storing and processing information.
Logical operator	The name of a logic circuit (AND, OR, NOT)
Truth table	A way of describing the output of a logic circuit for all possible inputs
Logic gate	A physical device which performs a logical operation
Logic circuit	Two or more logic gates connected together to solve a problem or perform a task
Artificial intelligence (AI)	Any machine that performs tasks that typically require intelligence in humans (suggestion - there's no agreed definition)

Boolean logic

NOT – exactly opposite to the input



AND – both inputs must be on to work

OR – either input needs to be ON or both to work

8 bit binary digit

128	64	32	16	8	4	2	1
0	1	0	1	1	1	0	1

64 + 16 + 8 + 4 + 1 = 93

	Keyword	Core Knowledge
1	Marcel Breuer	Modernist designer and architect.
2	Norman Foster	Award winning British architect known for his striking architecture and high-tech vision. His practice 'Foster + Partners' are known for the Millenium Bridge, Great Court at the British Museum, City Hall, 30 St Mary Axe (the Gherkin) in London, Reichstag in Berlin and a host of other buildings around the world.
3	Aldo Rossi	Italian architect and product designer of the post-modern movement. Produced iconic artefacts for Moteni and Alessi and recognised for his contributions to architectural theory.
4	Anthropometric Data	The study of the human body, it's measurement and proportions.
5	Ergonomics	The process of designing products and workplaces to fit the people who use them.
6	Location Research	Researching the area where the product will be located to ensure that it meets local requirements and context.
7	Primary Market Research	Data that is collected first-hand for a specific purpose.
8	Design Brief	Is a statement that outlines the expectations of project.
9	Paper	Measured in grams per square metre (gsm). Common weights range from 60-170gsm
10	Card and Board	Card weights range from 200gsm – 350gsm. Board is selected by thickness and measured in microns.
11	Foam Core	An inner foam core with a paper face. Rigid and Stiff. Commonly used for model making and mounting artworks.
12	Corrugated Card	Two layers of lightweight card containing a fluted layer for strength. Used for impact protection. Fully degradable and recyclable.
13	Orthographic Drawing	Has 3 main views: a plan view, front and side view. Should be drawn accurately and to a specified scale.
14	Scale	A drawing of an object will have its real size enlarged or reduced by a certain amount or specified scale. On a drawing the scale is represented as a ratio. For example, 1cm drawn to represent 1m (100cm) would be written as 1:100.

English

ANALYSIS	
Argument	The writer presents [topic] to…
Neat evidence	The phrase '…' shows…
Additional	Additionally, the phrase '…' adds to…
Language	The imagery suggests…
Your evaluation	A reader may also understand...
Structure and form	Structurally, the... tone emphasises...
Intentions of writer	The writer's intentions may have been to…
Society and context	Contextually, the writer may be reflecting…

POETIC POEMS	Definition
Personification	Giving something human characteristics
Oxymoron	Contradictory phrase
Enjambment	Continuing a line of poetry
Tone	Mood or atmosphere
Imagery	Descriptive language
Contrast	Very different things put together
Perspective	Viewpoint
Onomatopoeia	Words that sound like the thing
Extended	Carrying on
Metaphor	Saying something is something else
Simile	Saying something is like something else

A PERSUADER	Definition
Alliteration	Repeating same sound at starts of words
Points	Clear reasons to add to your argument
Exaggeration	Overstating
Repetition	Saying the same thing over and over
Statistics	Using numbers to represent facts
Unique ideas	Unusual or ways of approaching an issue
Anecdote	A short story used to make a point
Direct address	Talking to the audience
Emotive language	Appealing to people's feelings
Rhetorical questions	Questions not intended to be answered.

Gothic Fiction

Key words	Definition
Pathetic fallacy	the weather reflects the mood or feelings of the character.
Juxtaposition	*two contrasting ideas used together.*
Foreshadow	to hint at future events.
Euphemism	a writer wishes to describe some graphic or offensive event using milder imagery or phrasing.
Denotation	is literally what you can see or tell. For example, it is a picture of a cross.
Connotations	are the emotions/or thoughts we associate/feel when we see an image or a word. For example, the cross infers that someone has died here. It makes the author feel apprehensive.
Symbolism	things in the story have a deeper meaning under the surface.
Protagonist	the lead character in a narrative. It is normally someone who is heroic.
Antagonist	a character who opposes the main character.

English

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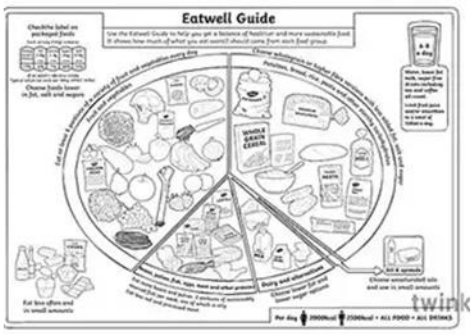
A Monster Calls

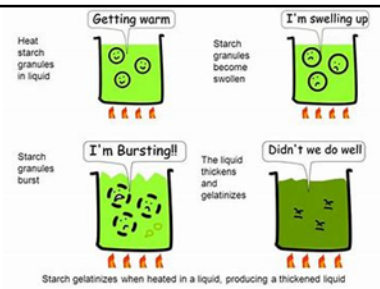
Key words	Definition
Inference	An Opinion or idea based on information you are given
Connotation	A feeling or idea that is suggested by a particular word
Characterisation	The way that the author builds description of characters
Empathy	To understand and share the feelings of another.
Sympathy	Feeling sorry for someone else who is experiencing a tough time
Interpretation	Explaining the meaning of something.
Narrative Framing	When a story is set within another story
Ambiguity	When meaning is unclear or uncertain
Repression	When something is held down – it usually applies to psychology such as choosing to ignore or not think about something
Projection	When someone puts their emotions onto someone or something else

Food

1	Hygiene and safety	Food poisoning can be caused by pathogenic bacteria in food. Pathogenic bacteria will multiply in food if they are given the right conditions: **Time, warmth, moisture, food**
		The 4 C's of Food Safey: **Cleaning:** cleaning the kitchen and personal hygiene is important to keep food safe and prevent bacteria from spreading **Cooking:** Hot food must be served piping hot: above 63°c. Cooking food thoroughly to a minimum core temperature of 75°C will ensure most bacteria is destroyed Leftovers - cooled as quickly as possible (within two hours), store in the fridge below 5°C. Reheated - steaming hot (minimum of 75°C) **Cross-contamination** Bacteria are transferred from one area to another. The main carriers of bacteria and causes of cross contamination are: Humans; Rubbish; Pets and other animals; Food, e.g. Raw meat or poultry **Chilling:** Reducing the temperature below 5°C slows the reproduction of micro – organisms. **Refrigerator** – 3-5 degrees **Freezer**- -18 degrees
		Danger zone = The temperature between 5°C– 63°C. Bacterial will multiply most rapidly within this temperature range. **Optimum temperature** = The bacteria multiply and reproduce at 37°C (body temperature) Reducing the temperature below 5°C slows the reproduction of micro – organisms
2	The Eatwell Guide	A healthy eating model that encourages us to eat a balanced diet Is suitable for everyone over the age of two years. **The Eatwell Guide** shows the different food groups we need to eat to have a healthy diet. ***Fruit and vegetables** Eat at least five portions every day ***Foods high fat, salt and sugar** This type of food is not needed to be healthy. Have less often and in small amounts. ***Beans, pulses, fish, eggs, meat and other protein** Eat some foods every day. ***Dairy and alternatives** Have some of these foods every day, Lower fat varieties ***Hydration** Water and lower fat milk are healthier drink choices. A max of 150ml of juice or smoothie a day. ***Potatoes, bread, rice, pasta or other starchy carbohydrates** Eat a food from this group at every meal. Go for wholegrain varieties. *Oils and spreads Eat in small amounts. 
3	Hydration	We need to stay hydrated to prevent ourselves from becoming dehydrated Water is needed for a wide range of functions in the body We should aim to drink 6-8 glasses of fluid a day
		Function of water: *acts as a lubricant for joints and eyes; *is the main component of saliva; * helps get rid of waste; * helps regulate body temperature. 
		The body loses water all the time: *urine, sweat, evaporation from skin.

Food

4	Energy	The power the body requires to stay alive and function.
	Macro-nutrients	Nutrients needed in large amounts to provide energy **Carbohydrates, protein, fats**
	Micro-nutrients	Nutrients needed in the diet in very small amounts- **Vitamins and minerals**
	Vitamins	**Fat-soluble** vitamins can be stored in the body: **Vitamin A** – dim light vision, healthy skin and eyes, resistance to infection; Leafy green vegetables, Orange/ yellow vegetables **Vitamin D** – absorbs calcium from foods to keep bones and teeth healthy: the sun, oily fish, meat, eggs
		Water-soluble vitamins cannot be stored in the body so are required daily **B vitamins: thiamine - Releases energy from food** **B1 Thiamine**: energy from carbohydrate and the nervous system. **B2 Riboflavin**: energy from protein, carbohydrate and fat. Transport and use of iron in the body **B3: Niacin**: required for the normal function of the skin, mucous membranes and nervous system **Vitamin C** - Keeps connective tissue healthy, Helps the body absorb iron: Oranges, blackcurrants, broccoli, red/ green lentils
	Minerals	Inorganic substances such as: Calcium, sodium and iron.
		Calcium - maintenance of bones and teeth, blood clotting, normal muscle function: milk, cheese and other dairy products **Sodium (salt)**- regulating the amount of water and other substances in the body: Breads and rolls, Pizza, Sandwiches, cured meats, Soups, tacos. **Iron** – formation of haemoglobin in red blood cells. Red blood cells carry oxygen around the body: meat, green leafy vegetables, pulses
5	Protein	**Protein**: made up of chemical 'building blocks' called **amino acids.** Essential for growth and repair and keeping cells healthy. Boys need more protein than girl for growth. **Animal sources** (meat; fish; eggs; milk; cheese) contains the full range of essential amino acids needed by the body. **Plant sources** (nuts; seeds; pulses, e.g. beans, lentils; mycoprotein; soya products) typically contain fewer essential amino acids. **Protein complementation** - certain foods can be combined so that the different protein can complement each other, e.g. bread (cereal) and pulses (baked beans).
	Functions	**Aeration** (foam) e.g. whisking egg whites; **thicken sauces** (coagulation) e.g. egg custard; **Binding (coagulation)** e.g. fishcakes; **form structures**, e.g. gluten development in bread; **gel**, e.g. lime jelly **Glazing**- (coagulation) egg is used to give shing golden colour **emulsifying – mayonnaise**; **Coating (coagulation)** – covering with breadcrumbs, fish; adding colour/flavour/moisture/nutrients.
6	Gelatinisation	The process of thickening which takes place when a mixture of starch and liquid is heated. *starch granules swell and eventually rupture, absorbing liquid, thickening the mixture. Eg – white sauce



Year 8 French Term 1: En classe (1)

Les matières	*School subjects*
1. le français	*French*
2. le théâtre	*Drama*
3. la géographie	*Geography*
4. la musique	*Music*
5. la technologie	*DT*
6. l'anglais	*English*
7. L'allemand	*German*
8. l'EPS	*PE*
9. l'histoire	*History*
10. l'informatique	*Computing*
11. le dessin	*Art*
12. les maths	*Maths*
13. les sciences	*Science*

Les opinions	*Opinions*
14. J'aime…	*I like…*
15. J'aime beaucoup…	*I really like…*
16. J'aime assez…	*I quite like…*
17. Je n'aime pas…	*I don't like…*
18. J'adore…	*I love…*
19. Je déteste…	*I hate…*
20. Je préfère…	*I prefer*
21. Ma matière préférée, c'est…	*My favourite subject is…*

Les raisons	*Reasons*
22. C'est amusant!	*It's fun!*
23. intéressant	*interesting*
24. créatif	*creative*
25. difficile	*difficult*
26. ennuyeux	*boring*
27. nul	*rubbish*
28. Le/la prof est sympa.	*The teacher is nice.*
29. Le/la prof est trop sévère.	*The teacher is too strict.*
30. J'ai trop de devoirs!	*I have too much homework!*

Les jours de la semaine	*Days of the week*
31. lundi	*Monday*
32. mardi	*Tuesday*
33. mercredi	*Wednesday*
34. jeudi	*Thursday*
35. vendredi	*Friday*
36. samedi	*Saturday*
37. dimanche	*Sunday*

Quelle heure est-il?	*What time is it?*
38. Il est (cinq) heures.	*It is (5) o'clock.*
39. Il est (cinq) heures et quart.	*It is quarter past (5).*
40. Il est (cinq) heures et demie.	*It is half past (5).*
41. Il est (cinq) heures moins le quart.	*It is quarter to (5).*
42. midi	*midday*
43. minuit	*midnight*

Les chiffres (*Numbers*)					
un	*1*	onze	*11*	vingt-et-un	*21*
deux	*2*	douze	*12*	vingt-deux	*22*
trois	*3*	treize	*13*	trente	*30*
quatre	*4*	quatorze	*14*	quarante	*40*
cinq	*5*	quinze	*15*	cinquante	*50*
six	*6*	seize	*16*	soixante	*60*
sept	*7*	dix-sept	*17*	soixante-dix	*70*
huit	*8*	dix-huit	*18*	quatre-vingt	*80*
neuf	*9*	dix-neuf	*19*	quatre-vingt-dix	*90*
dix	*10*	vingt	*20*	cent	*100*

'étudier'	*'to study'*
43. J'étudie	*I study*
44. Tu étudies	*You study*
45. Il étudie	*He studies*
46. Elle étudie	*She studies*
47. Nous étudions	*We study*
48. Vous étudiez	*You (plural) study*
49. Ils étudient	*They (masc.) study*
50. Elles étudient	*They (fem.) study*

Year 8 French Term 2: En classe (2)

La journée scolaire	*The school day*
1. Je quitte la maison.	*I leave the house.*
2. J'arrive au collège.	*I arrive at school.*
3. Je retrouve mes copains.	*I meet my friends.*
4. On commence les cours.	*We start lessons.*
5. Je mange à la cantine.	*I eat in the canteen.*
6. Je chante dans la chorale.	*I sing in the choir.*
7. Je joue dehors.	*I play outside.*
8. On recommence les cours.	*We restart lessons.*
9. Je rentre à la maison.	*I return home.*

'porter'	*'to wear'*
10. Je porte	*I wear*
11. Tu portes	*You wear*
12. Il porte	*He wears*
13. Elle porte	*She wears*
14. Nous portons	*We wear*
15. Vous portez	*You (plural) wear*
16. Ils portent	*They (masc.) wear*
17. Elles portent	*They (fem.) wear*

L'uniforme scolaire	*School uniform*
18. un pantalon	*trousers*
19. un polo	*a polo shirt*
20. un sweat	*a sweatshirt*
21. un pull	*a jumper*
22. un tee-shirt	*a t-shirt*
23. une chemise	*a shirt*
24. une cravate	*a tie*
25. une jupe	*a skirt*
26. une robe	*a dress*
27. une veste	*a jacket*
28. des chaussures	*shoes*
29. des chaussettes	*socks*
30. des baskets	*trainers*

Les adjectifs	*Adjectives*
31. chic	*trendy*
32. confortable	*comfortable*
33. démodé(e)	*old-fashioned*
34. pratique	*practical*
35. blanc(he)	*white*
36. bleu(e)	*blue*
37. gris(e)	*grey*
38. jaune	*yellow*
39. marron	*brown*
40. noir(e)	*black*
41. orange	*orange*
42. rose	*pink*
43. rouge	*red*
44. vert(e)	*green*
45. violet(te)	*purple*

Mon collège	*My school*
46. Le collège est…	*School is…*
47. grand/petit	*big/small*
48. de taille moyenne	*average sized*
49. Il y a…	*There is/are…*
50. 500 élèves	*500 students*
51. un cinéma	*a cinema*
52. une piscine	*a swimming pool*
53. une bibliothèque	*a library*
54. des courts de tennis	*tennis courts*
55. Il n'y a pas de…	*There isn't/aren't…*
56. harcèlement	*bullying*
57. toilettes sales	*dirty toilets*
58. petites salles de classe	*small classrooms*

Geography

Topic

Development

Development categories. Measuring development using data.
Opportunities and barriers for development.
Issues and challenges for developing countries.
Focus on Brazil.

Key Words

Development

The progress of a country in terms of economic growth, the use of technology and human welfare.

Development gap

The difference in standards of living and wellbeing between the world's richest and poorest countries (between HICs and LICs).

Gross national income (GNI)

A measurement of economic activity that is calculated by dividing the gross (total) national income by the size of the population. GNI takes into account not just the value of goods and services, but also the income earned from investments overseas.

Human Development Index (HDI)

A method of measuring development in which GDP per capita, life expectancy and adult literacy are combined to give an overview. This combined measure of development uses economic and social indicators to produce an index figure that allows comparison between countries.

International aid

Money, goods and services given by the government of one country or a multilateral institution such as the World Bank or International Monetary Fund to help the quality of life and economy of another country.

Life expectancy

The average number of years a person might be expected to live.

Literacy rate

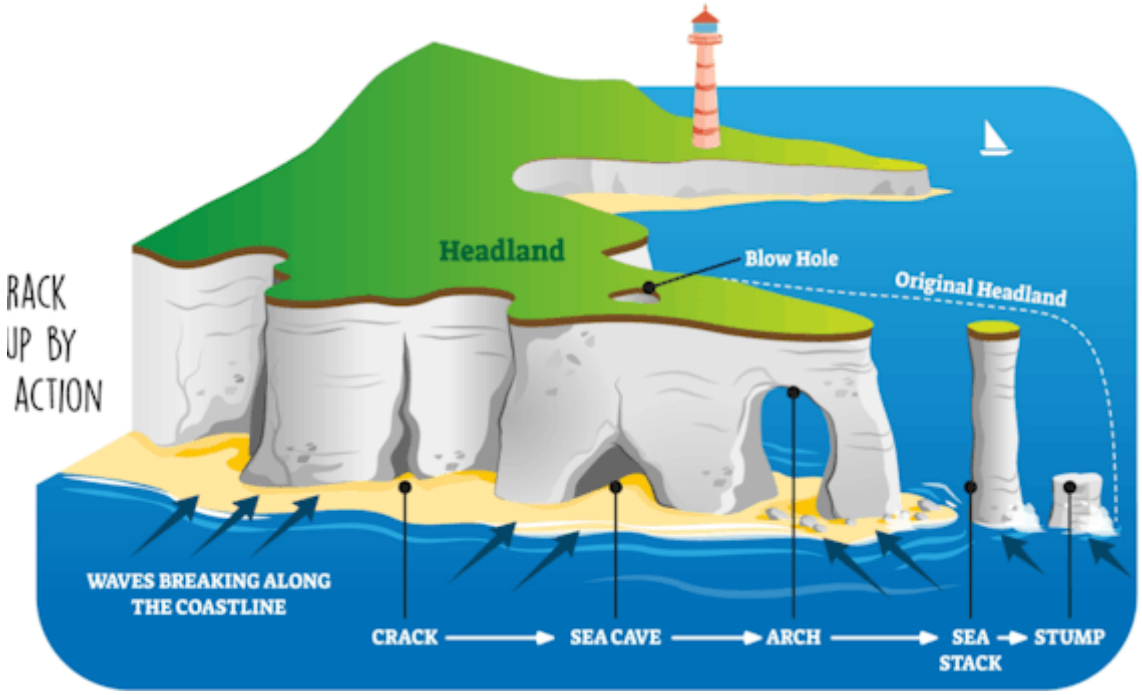
The percentage of people who have basic reading and writing skills.

Squatter settlement

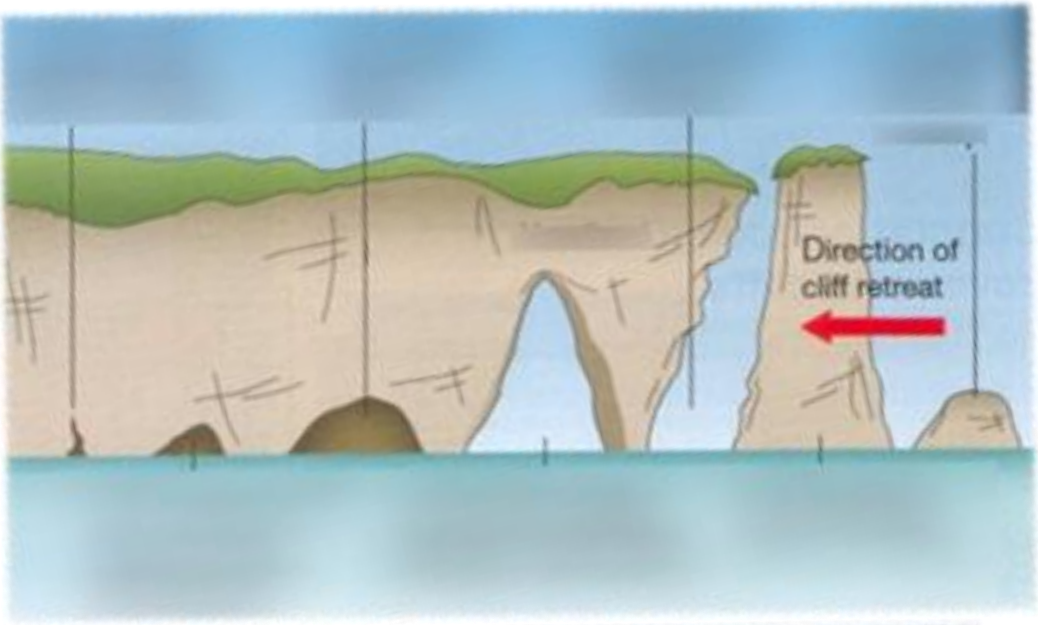
An area of poor-quality housing, lacking in amenities such as water supply, sewerage and electricity, which often develops spontaneously and illegally in a city in an LIC.

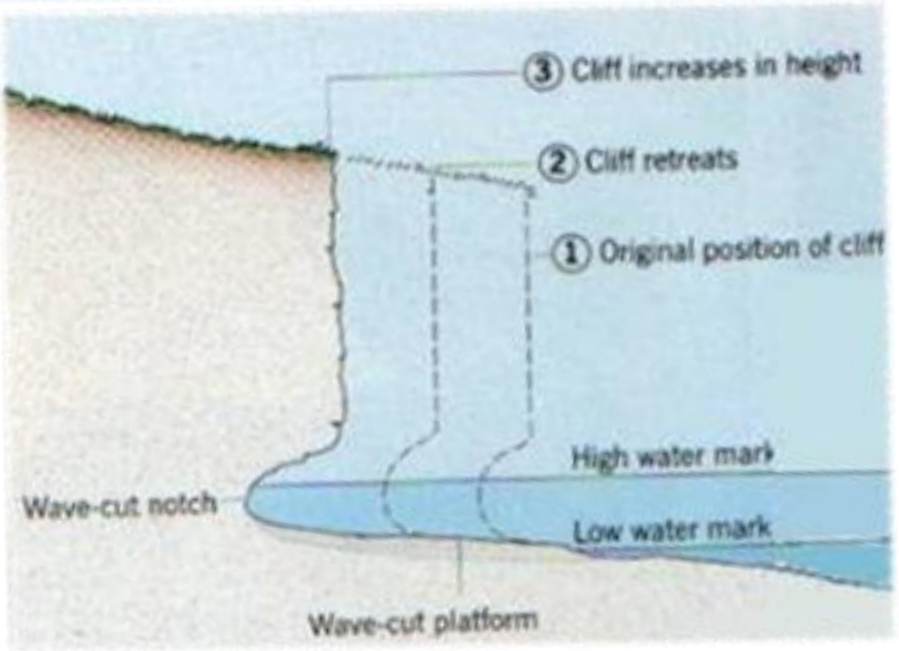
Geography - Coast

Swash	When a wave breaks, water rushes up the beach.
Backwash	The water then runs back down the beach, back out to the sea under the force of gravity.
Solution	Acids contained in sea water will dissolve some types of rock such as chalk or limestone.
Abrasion	Bits of rock and sand in waves are thrown against the cliff and grind down cliff surfaces like sandpaper.
Hydraulic Power	Water is forced into cracks in the rock, under pressure. This helps to break the rock up.
Attrition	Waves smash rocks and pebbles on the shore into each other, they break and become smoother.

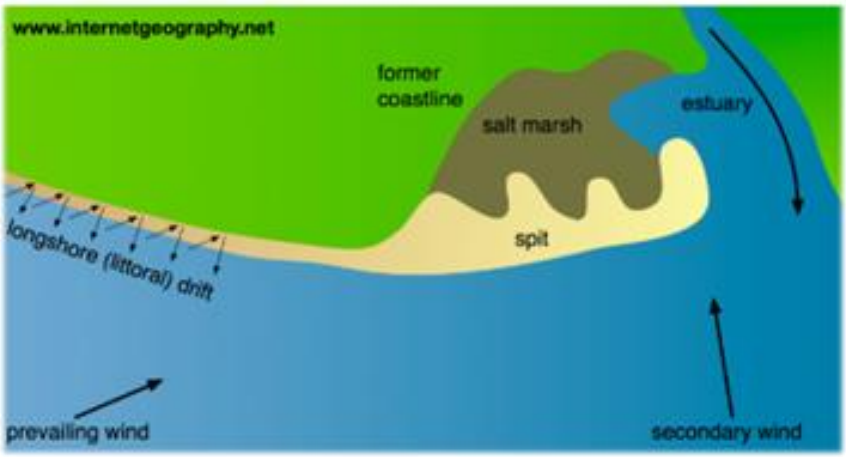


Geography

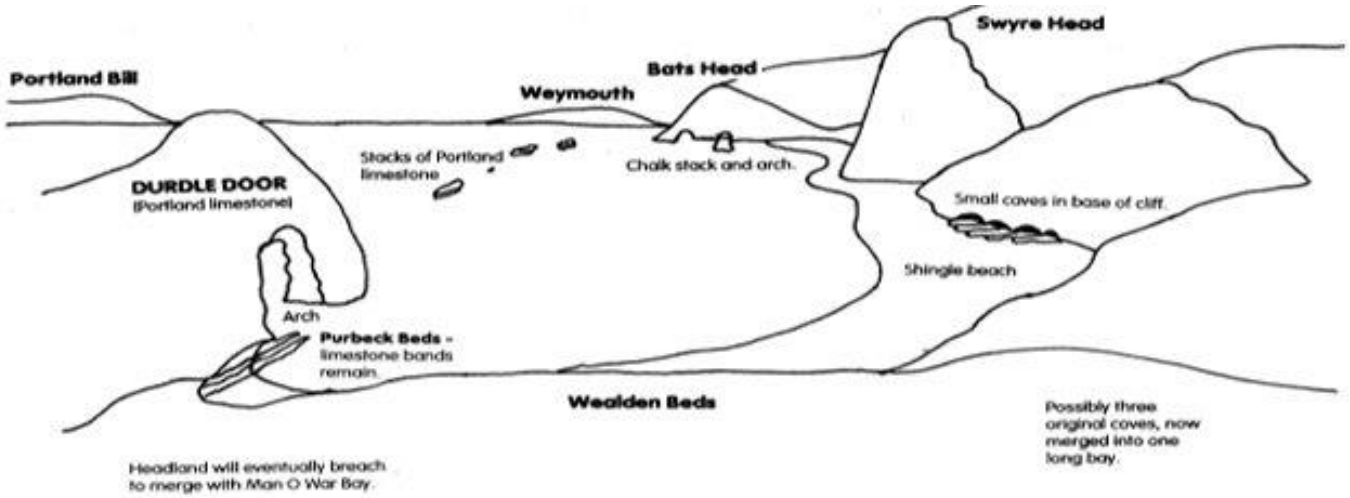




The formation of a spit



Geography - Lulworth Cove



Median (Middle)

The number which is in the middle or the middle value.

11 7 11 18 9 7 6 23 7

6 7 7 7 9 11 11 18 23

Median: 9

Mode (Most)

The number that appears the most.

11 7 11 18 9 7 6 23 7

6 7 7 7 9 11 11 18 23

Mode: 7

Mean (Average)

The total of the numbers divided by how many numbers there are.

11 7 11 18 9 7 6 23 7

11+7+11+18+9+7+6+23+7=99

99 / 9 = 11

Mean: 11

Range (Difference)

The difference between the largest and the smallest number.

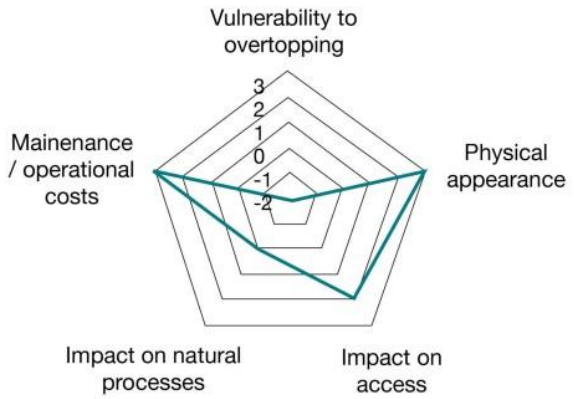
11 7 11 18 9 7 6 23 7

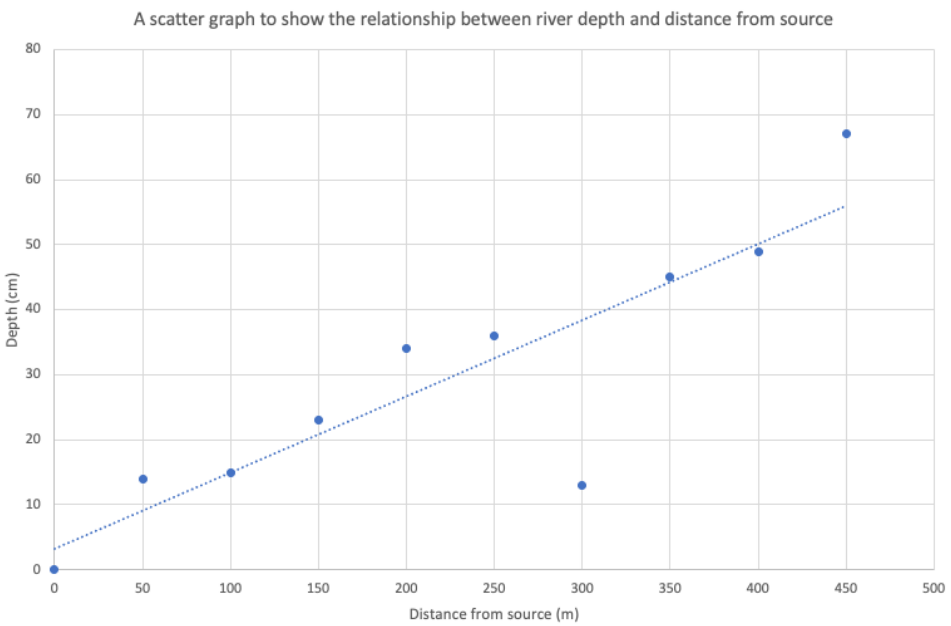
Large : 23 Small : 6

23 - 6 = 17

Range: 17

Radar Graph - example





Year 8 German Term 1: Schule ist klasse! (1)

Schulfächer	*School subjects*
1. Französisch	*French*
2. Theater	*Drama*
3. Erdkunde	*Geography*
4. Musik	*Music*
5. Werken	*DT*
6. Englisch	*English*
7. Deutsch	*German*
8. Sport	*PE*
9. Geschichte	*History*
10. Informatik	*Computing*
11. Kunst	*Art*
12. Mathe	*Maths*
13. Naturwissenschaften	*Science*

Die Meinungen	*Opinions*
14. Ich mag…	*I like…*
15. Ich mag…nicht.	*I don't like…*
16. Ich liebe…	*I love…*
17. Ich hasse…	*I hate…*
18. Mein(e) Lieblingsfach ist…	*My favourite subject is…*
19. Ich lerne lieber…	*I prefer learning…*
20. Ich finde es…	*I find it…*

Warum?	*Why?*
21. einfach	*easy*
22. schwierig	*difficult*
23. interessant	*interesting*
24. langweilig	*boring*
25. faszinierend	*fascinating*
26. nervig	*annoying*
27. toll	*great*
28. furchtbar	*terrible*
29. nützlich	*useful*
30. nutzlos	*useless*

Die Wochentage	*Days of the week*
31. Montag	*Monday*
32. Dienstag	*Tuesday*
33. Mittwoch	*Wednesday*
34. Donnerstag	*Thursday*
35. Freitag	*Friday*
36. Samstag	*Saturday*
37. Sonntag	*Sunday*

Wie viel Uhr ist es?	*What time is it?*
38. Es ist (fünf) Uhr.	*It is (5) o'clock.*
39. Es ist Viertel nach (fünf).	*It is quarter past (5).*
40. Es ist halb (sechs).	*It is half past (5).*
41. Es ist Viertel vor (sechs).	*It is quarter to (5).*
42. vor /nach der Pause	*before /after break*
43. in der ersten Stunde	*in the first lesson*

Les chiffres (*Numbers*)					
eins	*1*	elf	*11*	einundzwanzig	*21*
zwei	*2*	zwölf	*12*	zweiundzwanzig	*22*
drei	*3*	dreizehn	*13*	dreißig	*30*
vier	*4*	vierzehn	*14*	vierzig	*40*
fünf	*5*	fünfzehn	*15*	fünfzig	*50*
sechs	*6*	sechszehn	*16*	sechzig	*60*
sieben	*7*	siebzehn	*17*	siebzig	*70*
acht	*8*	achtzehn	*18*	achtzig	*80*
neun	*9*	neunzehn	*19*	neunzig	*90*
zehn	*10*	zwanzig	*20*	hundert	*100*

'lernen'	*'to learn'*
43. Ich lerne	*I learn*
44. Du lernst	*You (sing.) learn*
45. Er lernt	*He learns*
46. Sie lernt	*She learns*
47. Wir lernen	*We learn*
48. Ihr lernt	*You (plural) learn*
49. Sie lernen	*They learn*
50. Sie lernen	*You (formal) learn*

Year 8 German Term 2: Schule ist klasse! (2)

Der Schultag	*The school day*
1. Ich komme um…zur Schule.	*I get to school at…*
2. Ich komme mit dem Bus zu Schule.	*I get to school by bus.*
3. Ich treffe meinen Freunden.	*I meet my friends.*
4. Ich esse in der Kantine.	*I eat in the canteen.*
5. Ich spiele Fußball.	*I play football.*
6. Ich tchatte mit Freunden.	*I chat with friends.*
7. Ich singe.	*I sing.*
8. Ich gehe um…nach Hause.	*I return home at…*

'tragen'	*'to wear'*
9. Ich trage	*I wear/am wearing*
10. Du trägst	*You wear/are wearing*
11. Er trägt	*He wears/is wearing*
12. Sie trägt	*She wears/is wearing*
13. Wir tragen	*We wear/are wearing*
14. Ihr tragt	*You (plural) wear*
15. Sie tragen	*They wear/are wearing*
16. Sie tragen	*You (formal) wear*

Die Schuluniform	*School uniform*
17. ein Pulli	*a jumper*
18. ein T-Shirt	*a t-shirt*
19. ein Hemd	*a shirt*
20. ein Mantel	*a coat*
21. ein Rock	*a skirt*
22. ein Kleid	*a dress*
23. eine Jacke	*a jacket*
24. eine Hose	*trousers*
25. eine Krawatte	*a tie*
26. Schuhe	*shoes*
27. Socken	*socks*
28. Sportschuhe	*trainers*

Adjektive	*Adjectives*
29. bequem	*comfortable*
30. unbequem	*uncomfortable*
31. altmodisch	*old-fashioned*
32. praktisch	*practical*
33. unpraktisch	*impractical*
34. blau	*blue*
35. grau	*grey*
36. gelb	*yellow*
37. braun	*brown*
38. schwarz	*black*
39. weiß	*white*
40. rosa	*pink*
41. rot	*red*
42. grün	*green*
43. lila	*purple*

Meine Schule	*My school*
44. Es gibt…	*There is/are…*
45. Es gibt keinen/keine/kein…	*There isn't/aren't…*
46. eine Sporthalle	*a sports hall*
47. eine Aula	*a hall*
48. eine Kantine	*a canteen*
49. ein Labor	*a science lab*
50. die Toiletten	*toilets*
51. eine Bibliothek	*a library*
52. einen Computerraum	*a computer room*
53. ein Lehrzimmer	*a staffroom*
54. ein Klassenzimmer	*a classroom*
55. einen Schulhof	*a playground*

History

Keyword	Definition
Abolition	Movement to campaign to end slavery. An abolitionist was someone who wanted an end to slavery.
Human Rights	A right that all people are born with is called a human right. These include the right to freedom, the right to equal treatment under the law, and the right not to be tortured.
Lynching	A tactic used by the KKK which led to an illegal execution of black people by a mob
Olaudah Equiano	Former slave who campaigned to persuade British people that the slave trade was wrong.
Plantation	Huge farms where cash crops (e.g. sugar, tobacco, cotton) were planted and harvested. Often worked by slaves.
Racism	The belief that you are superior to other ethnicities or races.
Shackles	Iron chains used to fasten the legs or hands of a slave or prisoner
Slave	A person who is the property of the slave owner. Most slaves were captured in West Africa.
Slave auction	When the enslaved people arrived in the Americas slaves would be separated and sold. Often family members would never see each other again.
The Middle Passage	The is name given to the voyage of the slave ships from Africa to the Americas. The voyage itself took between 6 and 8 weeks.
Trade Triangle	The trade triangle was made up of three parts. Part 1 was from Britain to West Africa carrying manufactured goods. Part 2 was from West Africa to the West Indies carrying slaves, Part 3 was bringing resources such as cotton from the West Indies to Britain
Transatlantic slave trade	The forced movement of around 12-15 million Africans across the Atlantic Ocean to the Americas and the West Indies,
William Wilberforce	MP who played a significant role in the abolition movement in Britain.
Key Dates	
1562-9	John Hawkins becomes the first Englishman definitely known to have traded in Africans
1672	The Royal African Company is formed to control the English slave trade
1783	133 Africans are thrown overboard alive from the slave ship Zong so that the owners can claim compensation money from their insurance company.
1787	The Society for Effecting the Abolition of the African Slave Trade is founded in London.
1807	The Act to Abolish the Transatlantic Slave Trade is passed in Parliament.
1833	Slavery Abolition Act is passed in Parliament,

History

Keyword	Definition
BAME	An acronym for Black, Asian, and Minority Ethnic, often used in discussions about diversity and inclusion in the UK.
Boycott	When people refuse to buy something or pay for something as a protest
Empire Windrush	A passenger liner and cruise ship which, in 1948, brought a large group of West Indian immigrants to the United Kingdom.
Institutional racism	The collective failure of an organisation (like the police or fire service) to provide an appropriate and professional service to people because of their colour, culture or ethnic origin.
Integration	The action of bringing together and uniting things – especially people.
Notting Hill Carnival	An annual Caribbean festival event since 1966. It celebrates the British West Indian community and encourages cultural unity. In the '60s, the festival sprang up as one way to address community unrest and improve racial relations.
Notting Hill Riots	A series of racially motivated riots that took place in Notting Hill, an area of London, between 29 August and 5 September 1958. White, working-class, 'Teddy Boys,' and others, displayed hostility and violence to the Black community in the area.
Windrush Generation	British Caribbean people who came to the United Kingdom in the period after World War II, including those who came on other ships.

Key Dates	
1914-1918	World War I – Black soldiers took part in all branches of the British armed forces. Walter Tull was one of the most celebrated black British soldiers of the First World War.
1919	After WW1 many African and West Indian soldiers who had fought for their 'Mother Country' decided to make Britain their home, but in some cities, including the seaports Cardiff and Liverpool, between January and August 1919 they came under attack.
1939-1945	World War 2 – Around 10,000 Caribbean men and women joined the British armed forces, working behind the scenes and on the frontlines to defeat the Nazis.
1948	The Empire Windrush arrived at Tilbury Docks, Essex, on 21 June 1948.
1958	The Notting Hill Race Riots.
1965 – 68 - 76	The Race Relations Act of 1965 passed; protections against discrimination were extended in the Act of 1968, and further in the Act of 1976.
1966	Notting Hill Carnival (inspired by the London Caribbean Carnival organised by Claudia Jones) launched by a community activist Rhaune Laslett.
1971	The Immigration Act of 1971 passed, stripping Commonwealth citizens' right to remain in the UK and further restricting immigration.
1973	Trevor McDonald joins ITN and becomes the first black news reporter.
1978	Viv Anderson becomes the first black British footballer to play for England in an international tournament.
1981	New Cross Road house fire. 18 January 1981, around 100 people, the majority of whom were Black, were caught in a house fire at 439 New Cross Road. Those trapped upstairs jumped from windows to escape. A total of 13 people died in the fire. The event was considered racially motivated
1981	The Brixton Riot or Brixton Uprising – tensions between the black British community and the police in the area culminated in three days of rioting against police brutality and discriminatory policies. The uprisings spread across the UK.
1984	Tessa Sanderson becomes the first black British woman to win an Olympic gold medal; she is awarded an OBE in 1998.
1987	UK elects four black members of parliament: Dianne Abbott (the first black woman), Bernie Grant, Paul Boateng and Keith Vaz; all Labour MPs.
1993	Stephen Lawrence is stabbed to death in an unprovoked attack by a gang of white youths as he waits for a bus in south-east London. In 1999, the police response to the teenager's killing is labelled "institutionally racist" by Sir W. Macpherson.
2000	The Race Relations (Amendment) Act 2000 comes into force as an extension of the Race Relations Act 1976, requiring the police and other public authorities such as colleges and universities to take action to promote race equality.
2003-2013	Doreen Lawrence, mother of Stephen Lawrence, is awarded an OBE for services to community relations in 2003. She is made Baroness Lawrence of Clarendon in 2013.
2016	The first Black Lives Matter protest takes place in the UK.

Maths: 8.01 Ratio & scale……

Key words	
Ratio	a statement of how two numbers compare
Equal Parts	all parts in the same proportion, or a whole shared equally
Proportion	a statement that links two ratios
Order	to place a number in a determined sequence
Part	a section of a whole
Equivalent	of equal value
Factors	integers that multiply together to get the original value
Scale	the comparison of something drawn to its actual size.

Sparx codes for this topic	
M885	Writing & simplifying ratios
M801	Using equivalent ratios
M525	Sharing amounts into a given ratio
M267, M543	Additional higher content

Core knowledge

Representing a ratio

"For every 5 boys there are 3 girls"

5:3

This is the "whole" – boys and girls together

This represents the 5 boys

This represents the 3 girls

Double Number Line

This represents the 5 boys

This is the "whole" – boys and girls together

This represents the 3 girls

Maths: 8.02 Multiplicative change……

Key words	
Proportion	a statement that links two ratios
Variable	a part that the value can be changed
Axes	horizontal and vertical lines that a graph is plotted around approximation: an estimate for a value
Scale Factor	the multiple that increases/ decreases a shape in size
Currency	the system of money used in a particular country
Conversion	the process of changing one variable to another
Scale	the comparison of something drawn to its actual size

Sparx codes for this topic	
M478	Proportion
M681, U610	Money
M112, M324	Ratio in the real world

Core knowledge

Direct Proportion As one variable changes the other changes at the same rate.

This is a multiplicative change

4 cans of pop = £2.40

4 cans of pop = £2.40 → (×3) → 12 cans of pop = £7.20

4 cans of pop = £2.40 → (×0.5) → 2 cans of pop = £1.20

This multiplier is the same
In the same way that this would be for ratio

Sometimes this is easiest if you work out how much one unit is worth first
e.g. **1 can of pop = £0.60**

Maths: 8.03 Multiplying & dividing fractions ……

Key words	
Numerator	the number above the line on a fraction. The top number. Represents how many parts are taken
Denominator	the number below the line on a fraction. The number represent the total number of parts..
Whole	a positive number including zero without any decimal or fractional parts.
Commutative	an operation is commutative if changing the order does not change the result.
Unit Fraction	a fraction where the numerator is one and denominator a positive integer.
Non-unit Fraction	a fraction where the numerator is larger than one.
Dividend	the amount you want to divide up.
Divisor	the number that divides another number.
Quotient	the answer after we divide one number by another. e.g. dividend÷ divisor = quotient
Reciprocal	a pair of numbers that multiply together to give 1

Sparx codes for this topic	
M157, M197	Multiplying fractions
M110, M265	Dividing fractions

Core knowledge

Multiplying non-unit fractions

Shade in 3 parts

Repeat it on this many rows

$\frac{3}{4} \times \frac{2}{3}$

This many columns

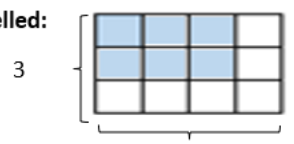
This many rows

$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

Parts shaded

Total number of parts in the diagram

Modelled:



Maths: 8.04 Working in the cartesian plane ……

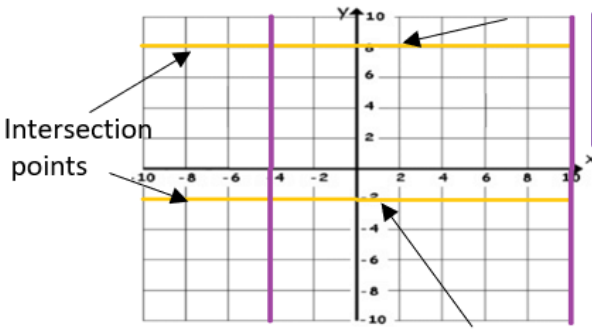
Key words	
Quadrant	four quarters of the coordinate plane.
Coordinate	a set of values that show an exact position.
Horizontal	a straight line from left to right (parallel to the x axis)
Vertical	a straight line from top to bottom (parallel to the y axis)
Origin	(0,0) on a graph. The point the two axes cross
Parallel	Lines that never meet
Gradient	The steepness of a line
Intercept	Where lines cross

Sparx codes for this topic	
M618, M797, M932	Plotting coordinates & lines
M544, M888, M205	Equations of straight line graphs
M448, M472	Direct & inverse proportion
M622, U989	Additional higher content

Core knowledge

Lines parallel to the axes

All the points on this line have a x coordinate of 10



Intersection points

Lines parallel to the **y axis** take the form **x = a** and are **vertical**

'a' can be ANY positive or negative value including 0

Lines parallel to the **x axis** take the form **y = a** and are **horizontal**

e.g. (3, -2) (7, -2) (-2, -2) all lay on this line because the y coordinate is -2

All the points on this line have a y coordinate of -2

Maths: 8.05 Representing data ……

Key words	
Variable	a quantity that may change within the context of the problem.
Relationship	the link between two variables (items). E.g. Between sunny days and ice cream sales
Correlation	the mathematical definition for the type of relationship..
Origin	where two axes meet on a graph.
Line of best fit	a straight line on a graph that represents the data on a scatter graph.
Outlier	a point that lies outside the trend of graph.
Quantitative	numerical data
Qualitative.	descriptive information, colours, genders, names, emotions etc
Continuous	quantitative data that has an infinite number of possible values within its range
Discrete	quantitative or qualitative data that only takes certain values.
Frequency	the number of times a particular data value occurs.

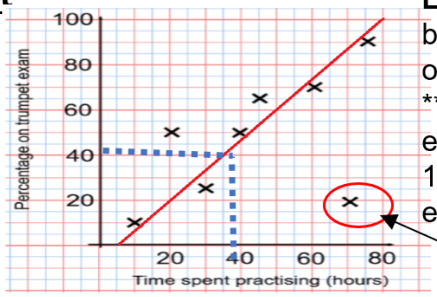
Sparx codes for this topic	
M769	Plotting scatter graphs
M596	Interpreting scatter graphs
M945	Collecting & recording data & using tables

Core knowledge

Using a line of best fit

Interpolation is using the line of best fit to estimate values inside our data point.

e.g. 40 hours revising predicts a percentage of 45.



Extrapolation is where we use our line of best fit to predict information outside of our data.
This is not always useful – in this example you cannot score more that 100%. So revising for longer can not be estimated

This point is an "**outlier**"
It is an outlier because it doesn't fit this model and stands apart from the data

Maths: 8.06 Tables & probability ……

Key words	
Outcomes	the result of an event that depends on probability.
Probability	the chance that something will happen.
Set	a collection of objects.
Chance	the likelihood of a particular outcome.
Event	the outcome of a probability – a set of possible outcomes.
Biased	a built in error that makes all values wrong by a certain amount.
Union	Notation '∪' meaning the set made by comparing the elements of two sets.

Sparx codes for this topic	
M718	Sample space diagrams
M829, M419	Venn diagrams
U369	Additional higher content

Core knowledge

Probability from sample space

What is the probability that an outcome has an even number and a tails?

P (Even number and Tails) = $\frac{3}{12}$

Numerator: the event

Denominator: the total number of outcomes

This is the set notation that represents the question **P**

In between the **( )** is the event asked for

There are three even numbers with tails

There are twelve possible outcomes

The possible outcomes from rolling a dice

The possible outcomes from tossing a coin

	1	2	3	4	5	6
H	1, H	2,H	3,H	4,H	5,H	6,H
T	1,T	2,T	3,T	4,T	5,T	6,T

Rhythm

Exploring Rhythm and Pulse

A. Key Words

PULSE – A regular **BEAT** that is felt throughout much music. Certain beats of the pulse can be emphasised to establish regular pulse patterns *e.g.*
1 2 3 4, 1 2 3 4 = a 4-beat pulse
1 2 3, 1 2 3 = a 3-beat pulse (often called a WALTZ)
1 2, 1 2, 1 2 = a 2-beat pulse (often called a MARCH)

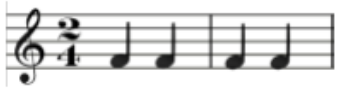
RHYTHM – A series of sounds or notes of different lengths that create a pattern. A rhythm usually fits with a regular pulse. Everyday sentences can be used to create rhythms. The patterns made by words create rhythms and this rhythm has a 4-beat pulse:

DURATION – The length of a sound – *long/short*
TEMPO – The speed of a sound or piece of music – *fast/slow*
TEXTURE – Layers of sound or how much sound is heard – *thick/thin*
STRUCTURE – The organisation of sound or how sounds are ordered
SILENCE – The absence of sound or no sound, shown in music by **RESTS**.
RHYTHM GRID NOTATION – A way of writing down and recording rhythms using boxes

B. Time Signatures

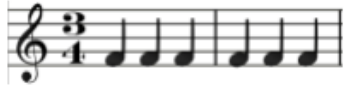
A **TIME SIGNATURE** tells us how many beats (and what type of beats) there are in each **BAR** of music and is made up of two numbers at the beginning of a piece of music.

2/4 = **TWO CROTCHET** beats per **BAR**



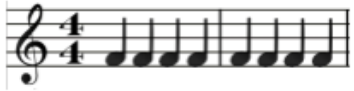
*e.g. a **MARCH***

3/4 = **THREE CROTCHET** beats per **BAR**



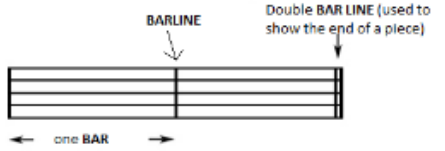
*e.g. a **WALTZ***

4/4 = **FOUR CROTCHET** beats per **BAR**



Bottom Numbers:
2 = Minim 4 = Crotchet 8 = Quaver

BARS AND BARLINES



C. Ostinatos, Cyclic and Polyrhythms

RHYTHMIC OSTINATO – a short repeated pattern made up of notes of different lengths but without a particular pitch.

CYCLIC RHYTHM – a rhythm which is repeated over and over again (in a cycle) many times.

POLYRHYTHM - the use of several rhythms performed simultaneously, often overlapping to create a thick, **POLYRHYTHMIC TEXTURE**. A common polyrhythm often used in Latin-American and African Music is to play a 3-beat and 2-beat rhythm simultaneously as shown below. This is called a "3 against 2 Polyrhythm"

3 beat rhythm	X		X		X		X		X		X	
2 beat rhythm	X			X			X			X		

E. Note Values - Note Names, Symbols and Duration

Note Name	Note Symbol	Note Value
Semibreve		**4 beats**
Minim		**2 beats**
Crotchet		**1 beat**
Quaver		**½ of a beat**
Pair of Quavers		**2 x ½ beats = 1**

Personal Development

Year 8 Drugs	
Possession	Being caught with a small amount of drugs that could reasonably be used by one person.
Supply	Being caught selling drugs or medicines to other people.
Intent to supply	Being stopped whilst holding drugs and the police have reasonable suspicions that you will share with others or sell.
Trafficking	Taking illegal substances from one country to another.
Rehabilitation	Drug users are sent to specialist clinics to help them break their addiction and often the causes of it as well.

Class	**Examples**	**Sentence for possession**	**Sentence for dealing**
A	Ecstasy, LSD, heroin, cocaine, crack, magic mushrooms, amphetamines (if prepared for injection)	Up to seven years in prison or unlimited fine or both	Up to life in prison or an unlimited fine or both
B	Amphetamines, barbiturates, cannabis (herbal and resin), codeine, ketamine, synthetic cannabinoids	Up to five years in prison or unlimited fine or both	Up to 14 years in prison or an unlimited fine or both
C	Tranquilisers, anabolic steroids, benzodiazepines, khat	Up to two years in prison or unlimited fine or both	Up to 14 years in prison or an unlimited fine or both
Temporary class	The Government can ban new drugs for 1 year under a 'temporary banning order' while they decide how the drugs should be classified	None, but police can take away a suspected temporary class drug	Up to 14 years in prison, an unlimited fine or both

Prescription medications
The law surrounding the selling or sharing of prescription medications is ambiguous and is often linked to the type of drug/medicine that is being sold. If the medicine is on the controlled substance list e.g. morphine, then the person supplying can be subject to the punishments which are for that class of drugs. It is extremely dangerous to share prescription drugs because of the possible side effects and impacts of other medications that are being taken.

Consequences of having a drug conviction	
Employment	Having a criminal record for a drug conviction can prevent you from getting jobs in certain fields such as education, working with vulnerable adults, Health professionals and legal professions.

Personal Development

Travel	A conviction for a drug offence can prevent travel to certain countries such as the USA and Australia.
Education	A criminal record may stop you from enrolling on a course at the university of your choice, as many universities will ask you to declare any criminal convictions on your application and consider this separately from your academic achievements. The nature of the offence, the time that has elapsed since the offence was committed and the potential impact on fellow students and staff will all be considered. Some universities and educational facilities will refuse applications on the groups of the crime committed.

Alcohol	
Signs of alcohol addiction It can be tricky to spot the signs as addicts can be secretive about it and can become angry if challenged. Some signs and symptoms can include: • A lack of interest in previously normal activities • Appearing intoxicated more regularly • Needing to drink more in order to achieve the same effects • Appearing tired, unwell or irritable • An inability to say no to alcohol • Anxiety, depression or other mental health concerns • Becoming secretive or dishonest	
Help and support	Drink aware: 0300 123 1110 (weekly 9am-8pm, weekends 11am-4pm) www.drinkaware.co.uk Al-Anon Family Group: 0800 0086 811 (10am-10pm, 365 days a year) www.al-anonuk.org.uk AddAction: www.addaction.org.uk – webchat facility Parents or trusted family members School Safeguarding Team or any member of staff Your GP or Practise Nurse

Personal Development

Year 8 Equality of Opportunity
Equality of opportunity is the principle that individuals should have the same chances to pursue their goals and ambitions, free from discrimination and artificial barriers. This is often referred to as a "level playing field" where individuals can compete for positions and advantages without unfair advantages or disadvantages. Critics argue that merely providing opportunities does not account for the different starting points individuals have due to their backgrounds.
The Protected Characteristics 9 characteristics written in The Equality Act 2010 which protects individuals from discrimination. If discrimination takes place, individuals have the right to take legal action. DR GRAMPSS is a helpful mnemonic to remember all 9 characteristics. **D** Disability **R** Race **G** Gender identity **R** Religion **A** Age **M** Marriage or civil partnership **P** Pregnancy and/or maternity **S** Sex **S** Sexual orientation

Year 8 Types/Patterns of work and Employment	
Full-time	Employment where an individual works a minimum number of hours set by their employer, often around 35-40 hours per week.
Part-time	Employment where individuals work fewer hours than a full time employee and/or may have flexible schedules.
Casual	Casual work refers to temporary and flexible positions that do not guarantee ongoing work or set hours.
Permanent	Working for an employer without a predetermined end date.
Contract	A contract employee is contracted to work for a client over a specified period of time.
Shift work	Work compromising recurring periods in which different groups of workings do the same jobs in relay.
Voluntary	The act of willingly offering time and effort towards a cause or for the benefit of a community.
Self-employment	Working for oneself as a freelance or the owner of a business rather than for an employer.
Job share	Two or more part-time employees share the work and pay of a single full-time job.
Telecommuting	The practice of working from home or otherwise in a location that is not one's official workplace, making use of the internet and computer technology.
Seasonal work	Temporary employment that recurs around the same time every year, typically lasting from a few weeks to a few months.

Personal Development

Working from home	An arrangement where employees perform their job duties from home instead of a traditional office.
Trades	Jobs that require specialized training and skills but not a degree. These jobs can be obtained through apprenticeships or on-the-job training e.g. electricians, plumbers and carpenters.
Professionals	Jobs performed by individuals who have specialised education and training (usually a degree).
Salary	A fixed regular payment, typically paid monthly but often expressed as an annual sum, made by an employer to an employee, especially to a professional.
Hourly rate	Unlike salaried employees who receive a fixed amount regardless of hours work, hourly workers are compensated based on the actual time spend on the job.

WADHAM KS3 PE KNOWLEDGE ORGANISER: NETBALL

Physical Education

Skills and Techniques:

Chest pass: Most accurate pass. Hands form W shape behind ball. Step forward into pass, keep elbows close to body. Push through with ball.

Shoulder Pass: Used to cover bigger distances. Place throwing hand behind ball, move opposite foot in front of body. Fully extend arm when passing, following through with pass.

Bounce Pass: Used when space is restricted. Standing with one foot forward. Push ball into floor.

Overhead Pass: Used for distance or height. Place the ball over your head, hands in the W position. Push through the ball and step forward.

Shooting: Ball on fingertips, use non-throwing hand to steady ball. Bend knees and elbows, liftingball up to net.

Rules:

- Matches last for 1 hour and are split into 15-minute quarters.
- The game is started by one 'centre' stepping into the centre circle and then passing the ball.
- Two umpires officiate the game.
- Players are not allowed to travel (run) with the ball
- Players must remain within their designated zones
- A defending player must defend from at least 1m away from the opposition player with the ball.
- It is a non-contact sport
- A player can only hold the ball for 3 seconds

Positions:

7 players on a team

GK - Goalkeeper
GD - Goal Defense
WD - Wing Defense
C - Centre
WA - Wing Attack
GA - Goal Attack
GS - Goal Shooter

Scoring System:

To score a goal, a player must shoot within the goal area (D) and the ball must fall through the opposition's goal ring.

The team with the most points at the end of the game wins.

Tactics:

Quick Passing

Dodging and changing speed to receive ball.

Key Words:

Chest Pass
Bounce Pass
Shoulder Pass
Overhead Pass
Centre Pass
Defensive Third
Centre Third
Attacking Third
Goal
Goal Area

Key Words:

Pivot
Footwork
Contact
Held ball
Obstruction
Intercept
Marking
Penalty

WADHAM KS3 PE KNOWLEDGE ORGANISER: Football

Skills and Techniques:

Passing / receiving: Play the ball to your team using different types of passes and then control the ball with different parts of your body.

Dribbling / moving with the ball: You can use different parts of your foot to dribble with the ball.

Shooting & Attacking play: You can take aim at the goal, you can cross the ball towards the attackers or you can play a through ball forward to the attackers.

Heading: This can be attacking to score a goal or defending to clear the ball away from the goal.

Defensive play: You can tackle, jockey, close down and mark a player.

Rules:

- A game consists of two 45-minute halves.
- The game is started with a centre kick, from the centre spot. The opposition can then come into the center circle.
- One referee officiates the game with the help of two assistant referees.
- Players are not allowed to use their hands or arms to control the ball unless they are the goalkeeper.
- Players are prevented from 'goal hanging' by the off-side rule.
- If a team kicks the ball off the pitch, the opposition will receive a throw in or a corner

Positions:

11 players on a team (9 in year 7)

Goalkeeper
Right Back
Left Back
Centre Backs (2)
Centre Midfield (2)
Right Wing
Left Wing
Forwards/Striker (2)

Scoring System:

A player can shoot from anywhere to score a goal.

The ball must completely cross the goal line to count.

The team with the most goals at the end of the game wins.

Tactics:

Changing formations depending on the opposition/ score/ time remaining

Key Words:

Penalty
6-yard box
18-yard box
Indirect Free kick
Top bins
Corner
Pass Back
Kick off
Corner

Key Words:

Jockey
Dribble
Laces
Throw in
Keepy ups
Toe taps
Happy feet
Cruyff turn
Off-side

WADHAM KS3 PE KNOWLEDGE ORGANISER: Hockey

Skills and Techniques:

Dribbling: Allows you to move the ball around the pitch without losing possession. Keep the ball close to your stick at all times. 'Sit on the toilet'. When running, keep the ball in front of you and at the 1 o'clock position

Don't look down when running with the ball. Keep your head up.

Passing: Push pass - stand side onto the ball. Bend your back leg and keep your front leg straight, with your foot pointing towards where you want the ball to go. With a slight bend in your arms, place your stick on the ball and push it forwards, transferring your weight from your back foot to your front foot.

Tackling: Keep your stick on the ground.

Block tackle – put your stick flat on the ground with your body in a lunge position.

Rules:

- A game consists of two 30 minute halves.
- The game is started with a centre pass/push back from the centre of the pitch.
- Two umpires officiate the game.
- You can only use the flat side of the stick to control the ball.
- You cannot use your feet or hands to control the ball unless you are the goalkeepers
- Players can 'self-pass' from free hit and pass ins. The opposition need to be 5m away from where it is taken
- Only 1 defender can tackle the player with the ball at a time.

Positions:

11 players on a team

CF - centre forward
RF - right forward
LF - left forward
CM - centre midfield
RM - right midfield
LM - left midfield
SW - sweeper
CB - centre back
RB - right back
LB - left back
GK- goalkeeper

Scoring System:

Players can only shoot within the D.

The ball must completely cross the goal line to count.

The team with the most goals at the end of the game wins.

Tactics:

Changing formations depending on the opposition/ score/ time remaining.

Pass to your team mates 'stick side'.

Key Words:

Penalty flick
16 yard hit out
Self-pass
Short corner
Long corner
PPE gum shield / shin pads
Centre pass

Key Words:

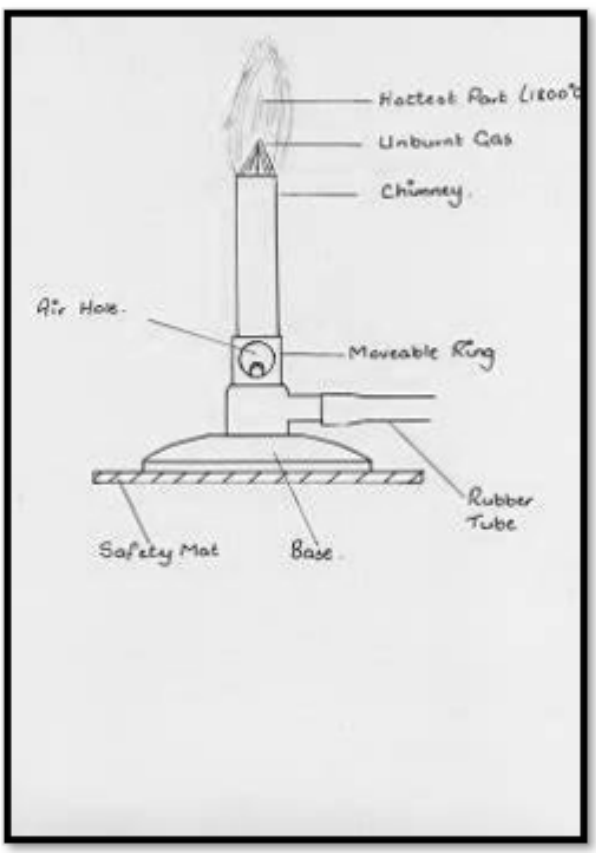
Indian dribbling
Dribbling
Push pass
Hockey stick
Block tackle
Reverse stick
Jab tackle

Science

Science Safety – Lab safety rules and how to use a Bunsen Burner

Lab rules for students

- Do not enter the lab without permission
- Dress for practical work – tie long hair back, tuck in anything that is trailing, roll up sleeves.
- Follow instructions from your teacher or other adults.
- Make sure your working area is safe – stools, bags and coats should be tucked in, out of the way.
- Never run in the lab
- Don't eat or drink
- Do not taste or sniff chemicals
- Never leave an unattended Bunsen burner on a blue flame
- Check that electrical equipment is safe
- Know what to do in case of accidents



Science – 8A

Food

We need to eat a wide variety of foods to get all the food substances that we need. When we do this, we are said to have a **balanced diet**. Carbohydrates, proteins, fats and oils (lipids), vitamins and minerals are **nutrients**, which means that they provide the raw materials for making other substances that the body needs.

Substance needed	Examples	Why it is needed	Good sources
carbohydrate	starch, sugars	for energy (in respiration)	pasta, bread, rice, potatoes
protein		for growth and repair (building new substances)	meat, fish, beans
vitamins	vitamin C	for health	fruits and vegetables (e.g. oranges contain lots of vitamin C)
minerals	calcium	for health	fruits, vegetables and dairy products (e.g. milk contains calcium)
fibre		for health (helps to stop constipation)	wholemeal bread, wholegrain rice, celery and other fibrous vegetables
water		for health (water dissolves substances and fills up cells)	

We can do tests to find out which substances are in foods. For example, starch makes iodine solution go a blue-black colour.

Nutrition information labels on foods tell us what the food contains. The labels also tell us how much energy is stored in the substances that make up the food. The amount of energy is measured in **kilojoules (kJ)**. The amount of energy a person needs in a day depends on:

- levels of activity (more active people need more energy)
- age (teenagers need more energy from food than adults do)
- whether the person is a girl or a boy (boys need more energy than girls).

Food labels may also have health claims on them, which use persuasive language.

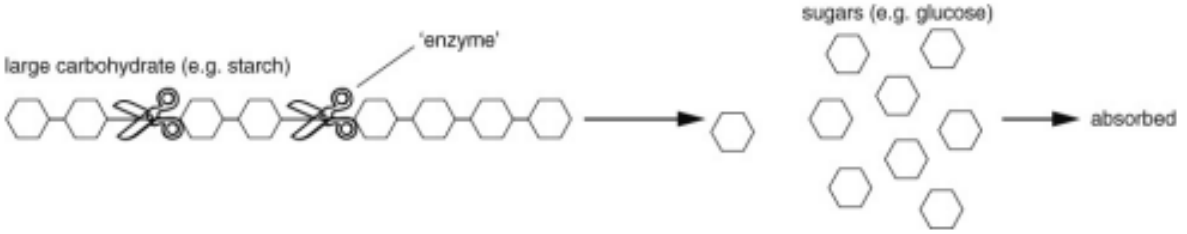
Eating too much or too little can cause problems. Too much fat may cause **heart disease** and can make people overweight. Very overweight people are **obese**.

People starve and become weak if they eat too little. **Starvation** and obesity are both forms of **malnutrition**. Other forms include **deficiency diseases** such as **scurvy**, which is due to a lack of vitamin C.

Digestion

Digestion turns large **insoluble** substances into small **soluble** ones. The organs of the **digestive system** help us digest food. Many of them produce **enzymes** (substances that are **catalysts** and help speed up food digestion).

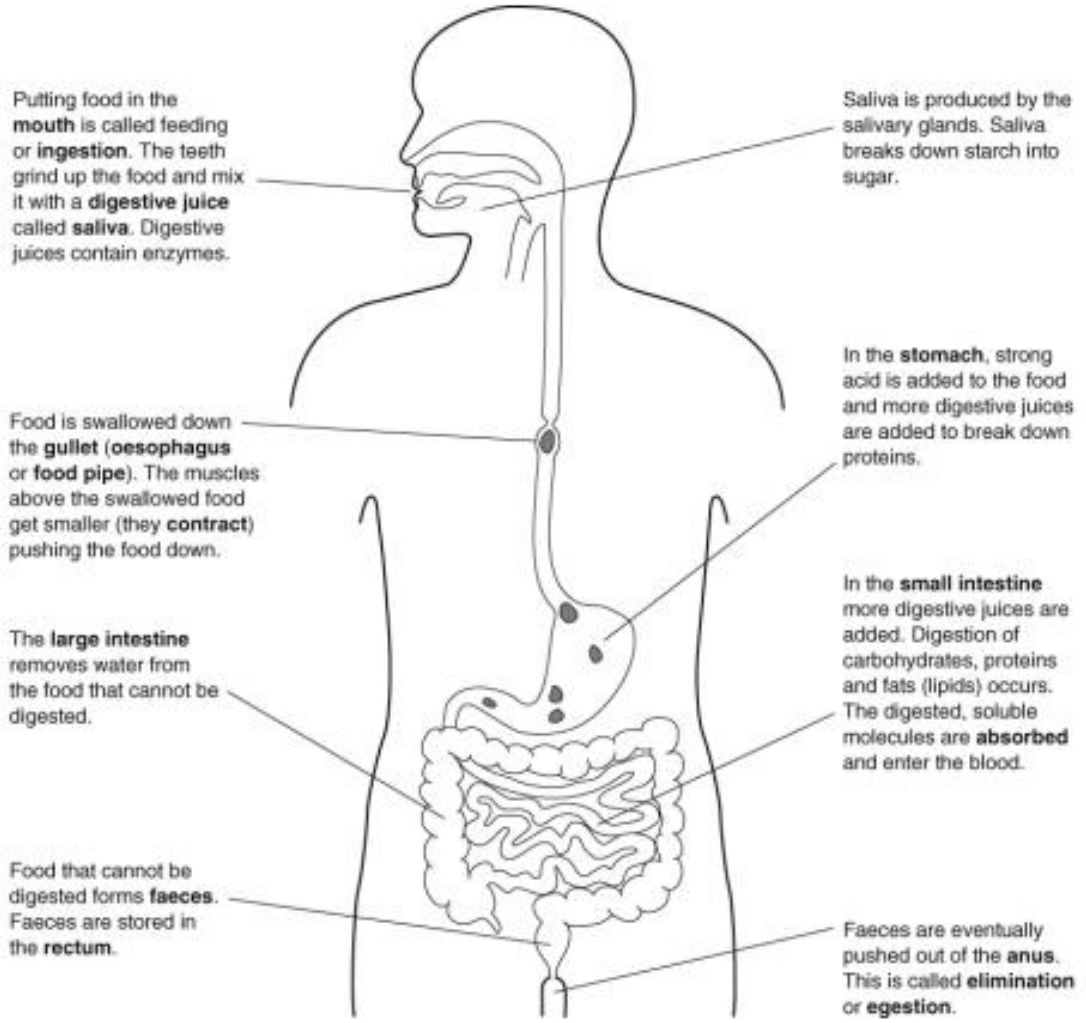
We can use a **model** to make it easier to think about how enzymes work:



Science – 8A

The gut

Food is digested in the **gut**.



To help absorb the digested food, the wall of the small intestine is folded and covered with **villi**. The cells have microvilli. These features all increase the **surface area**. The wall of the small intestine is also only one-cell thick, meaning that it is easy for small molecules to **diffuse** out of the small intestine and into the blood. The digested food molecules are carried in the blood **plasma**.

The surface area is the total area of the faces of a three-dimensional object.

Science – 8E

Combustion and oxidation

Combustion is when a fuel burns. → Stored energy in the fuel is transferred to the surroundings. → This transfer causes the surroundings to get hotter. Some energy may also be transferred by light or sound. → The transfer can be useful for heating, or making engines move.

A **hydrocarbon** is made only of carbon and hydrogen. Many fuels are mainly hydrocarbons.

Hydrocarbon combustion:

hydrocarbon + oxygen → water + carbon dioxide

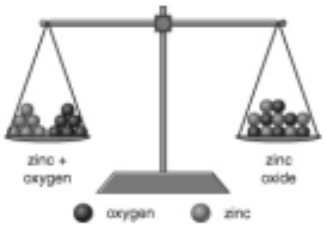
This is a word equation.

Combustion is also an **oxidation reaction** because the substances react with oxygen.

Carbon and hydrogen are **non-metals** but metals can also be oxidised:

metal + oxygen → metal oxide

Conservation of mass in reactions



In a reaction, the mass of the **reactants** is always the same as the mass of the **products**.

Metals can appear to gain mass when heated in air:

zinc + oxygen → zinc oxide

The difference in mass is the mass of oxygen that reacted.

When a hydrocarbon fuel combusts, it appears to lose mass because the products of the reaction (carbon dioxide, water vapour) are lost into the air.

Phlogiston

Before oxygen was discovered, scientists explained combustion by saying that, as a substance burnt, it gave out a substance called phlogiston to the air. For example:

wood → calx (ash) + phlogiston

However, the phlogiston theory could not explain why metals gained mass when they reacted with air.

The fire triangle and putting fires out

The fire triangle shows the three factors needed for a fire to burn. If any factor is removed, the fire will go out.

We use **fire extinguishers** to put out fires. Water extinguishers remove heat. Powder and carbon dioxide extinguishers exclude oxygen. Foam extinguishers can both remove heat and exclude oxygen.

Oil fires should not be treated with water because the water sinks through the oil, which heats up and causes the water to evaporate. This causes the oil to 'spit' and can spread the fire.

Hazard symbols

Hazard symbols explain why a substance must be handled carefully.

Air pollution from burning fossil fuels

Complete combustion – the fuel reacts completely with oxygen, e.g.:

hydrocarbon + oxygen → carbon dioxide + water

Incomplete combustion – the fuel only partly reacts with oxygen, e.g.:

hydrocarbon + oxygen → carbon dioxide + water + carbon monoxide + carbon (soot)

Impurities in fossil fuels, such as substances that contain sulfur, also react with oxygen when heated:

sulfur + oxygen → sulfur dioxide

At the very high temperatures in vehicle engines, nitrogen gas from the air reacts with oxygen:

nitrogen + oxygen → nitrogen oxides

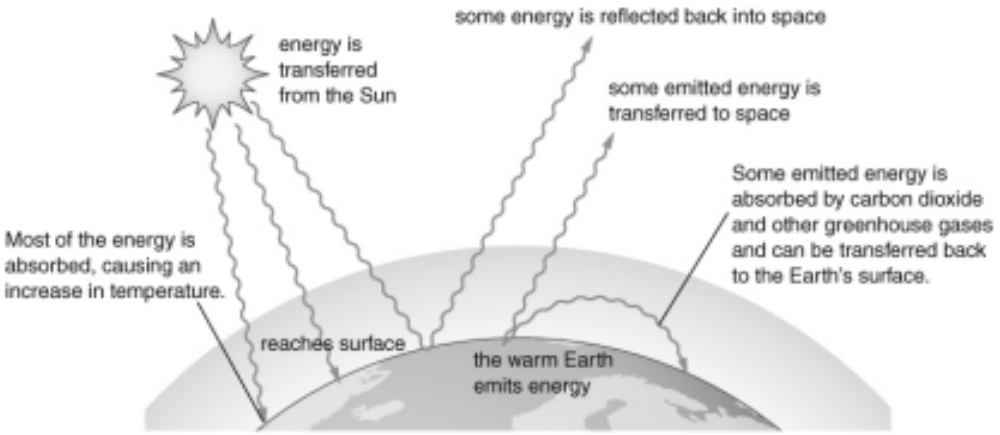
Many products from burning fossil fuels are **pollutants**; they harm the habitats and their organisms.

Acid rain

Acid rain is rain water that is made more acidic by dissolved sulfur dioxide and nitrogen oxides. Some of these gases are removed from power station chimneys by neutralisation, and by using **catalytic converters** on vehicle exhausts. Catalytic converters also remove carbon monoxide (another pollutant).

Greenhouse effect and global warming

Greenhouse gases in the Earth's atmosphere keep the Earth's surface warm. This is the **greenhouse effect**.



Carbon dioxide is a greenhouse gas. Most scientists think that the extra carbon dioxide released from burning fossil fuels has increased the temperature of the Earth's surface (**global warming**).

Scientists predict that global warming will cause **climate change**. The best way to control global warming is probably to reduce the amount of carbon dioxide we release into the air.

Science – 8B

The plant kingdom

Organisms are **classified** into groups. The plant kingdom contains organisms that have green leaves, cell walls made of cellulose and can **photosynthesise**. Kingdoms are subdivided into smaller and smaller groups. The last two of these are the **genus** and the **species**. The names of these two groups are used to give each species a two-word scientific name.

Biodiversity

The range of species in an area is called **biodiversity**. We should preserve biodiversity because:

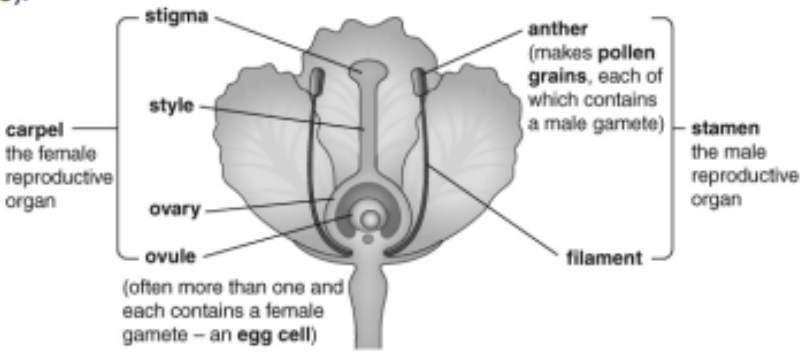
- organisms depend on one another (they are **interdependent**)
- we won't be able to make use of organisms if they become **extinct**
- more biodiverse areas recover better from natural disasters.

Sexual reproduction in plants

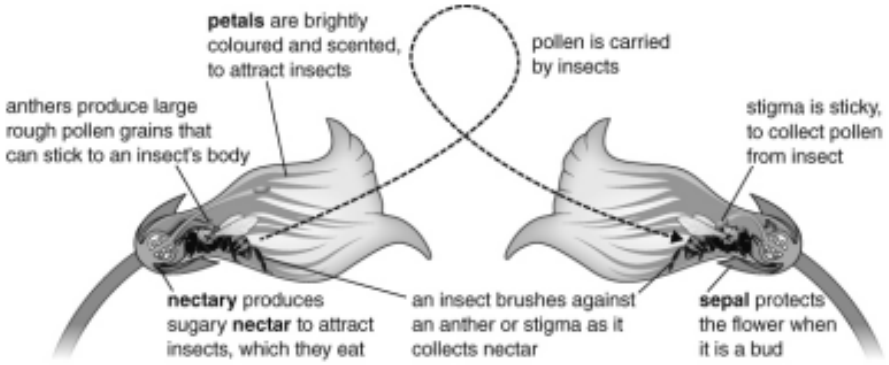
Reproduction produces new living things (**offspring**). **Sexual reproduction** needs two parents to produce **sex cells** or **gametes**. The gametes fuse to produce a **fertilised egg cell** or **zygote**. The zygote uses **cell division** to grow into an **embryo**, which can grow into an adult and become a parent (completing its **life cycle**).

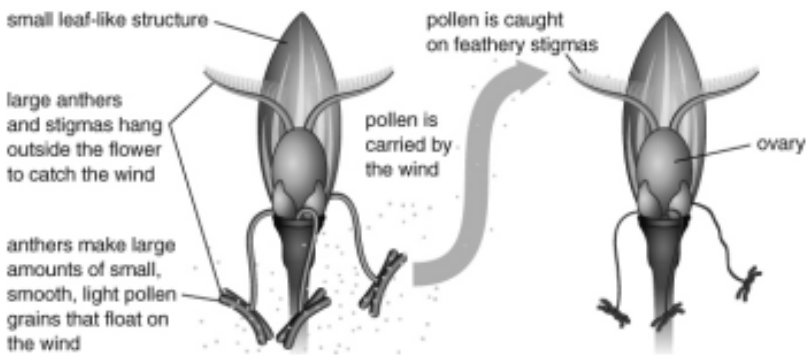
The offspring from sexual reproduction contain **characteristics** from both parents. The differences in these characteristics is **inherited variation**.

Gametes are produced by **reproductive organs**. In plants, these are contained inside **flowers**.



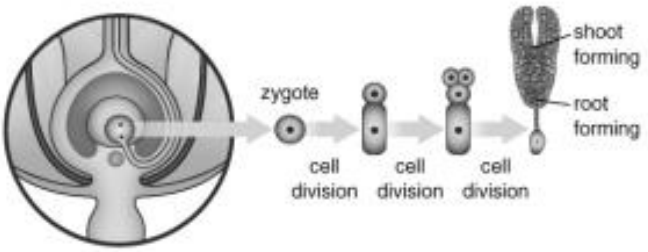
The **pollen grains** made in the anther need to be carried to the **stigma** of another flower. They are usually carried by insects or the wind. The carrying of pollen from an anther to a stigma is called **pollination**.





Science – 8B

Once on the stigma, a pollen grain grows a **pollen tube,** which enters the **ovule** containing an **egg cell**. The nucleus from the male gamete inside the pollen grain joins with the nucleus inside the egg cell to form a zygote. This is called **fertilisation**. The zygote grows into an embryo and the ovule becomes a seed, containing the embryo and a food store.

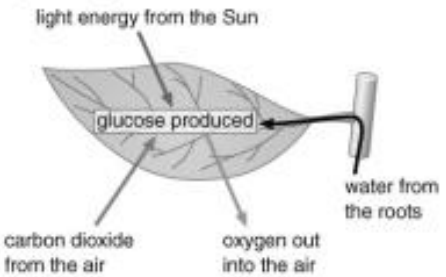


A part of the flower forms a **fruit**. This is used for **seed dispersal**, which stops the new plants competing with the parent plants for water, nutrients, light and space.

- Some fruits are eaten by animals and the seeds come out in their **faeces** (e.g. apples).
- Some fruits are carried on the fur of animals (e.g. burdock).
- Some fruits are carried by the wind (e.g. dandelion).
- Some fruits explode, scattering the seeds (e.g. lupins).

When conditions are right, seeds **germinate**. The **resources** needed are water, oxygen and warmth (WOW). Water allows chemical reactions to start, which break down the food store and allows cells in the embryo to swell up. Oxygen is needed for **respiration**, to release energy from the food store. Warmth is needed to speed up the chemical reactions.

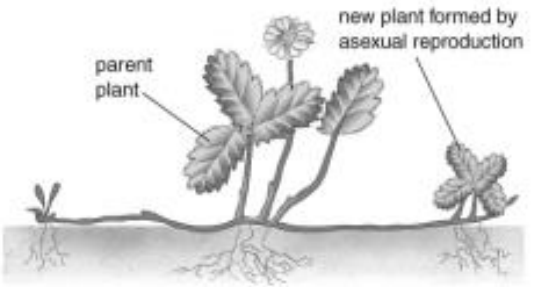
The root grows first then the shoot. Finally new leaves open and **photosynthesis** can start in the **chloroplasts**. The glucose from photosynthesis is turned into **starch** to be stored.



A growing plant needs light, air, water, warmth and nutrients called **mineral salts** (LAWWN).

Asexual reproduction in plants

Some plants can reproduce using **asexual reproduction**. This is when *one* parent plant is able to produce offspring (e.g. by using **runners** in strawberries or **tubers** in potatoes).



Accuracy, estimates and sampling

We can take a small sample of a larger population and use it to **estimate** what the larger population is like. Plant populations in an area can be estimated by taking samples using a **quadrat**. The more samples we take the more **accurate** the estimate is likely to be but the longer it will take to do.

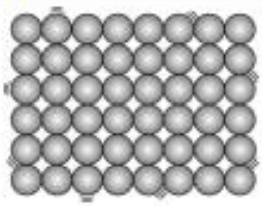
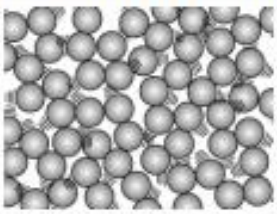
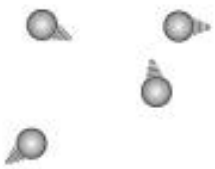
Science – 8I

Fluids

Fluids are liquids or gases.

The particle model

The particle model can explain the properties of solids, liquids and gases.

	Solids	Liquids	Gases
Properties	• fixed volume • fixed shape	• fixed volume • take shape of container	• expand to fill container • take shape of container
Particle diagram			
Particles	• are close together • are held in fixed positions by strong forces	• are close together • are held by fairly strong forces • can move around	• are far apart • are held by very weak forces • can move around

Density

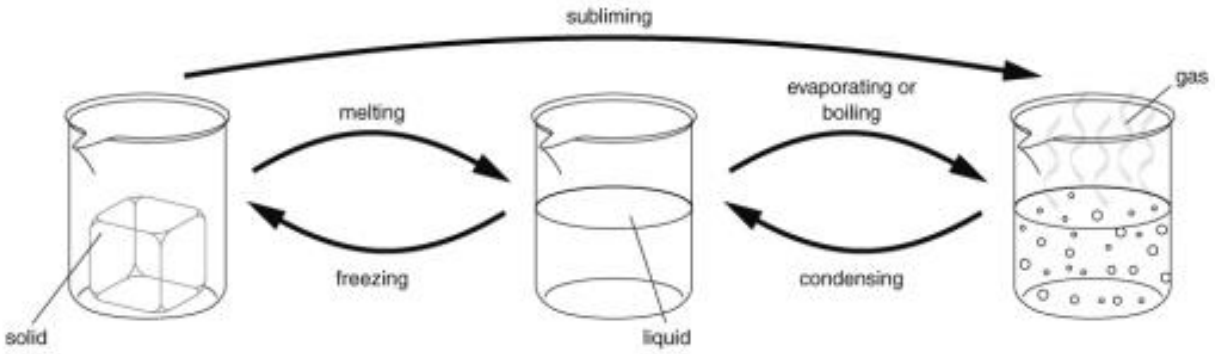
Density is the mass of a certain volume of something, and it can be calculated using this formula:

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

The units for density are g/cm^3 or kg/m^3.

Changes of state

Substances can change state when they are heated or cooled. The three states of matter are solid, liquid and gas.



A liquid evaporates from its surface. When it is boiling, bubbles of gas form within the liquid.

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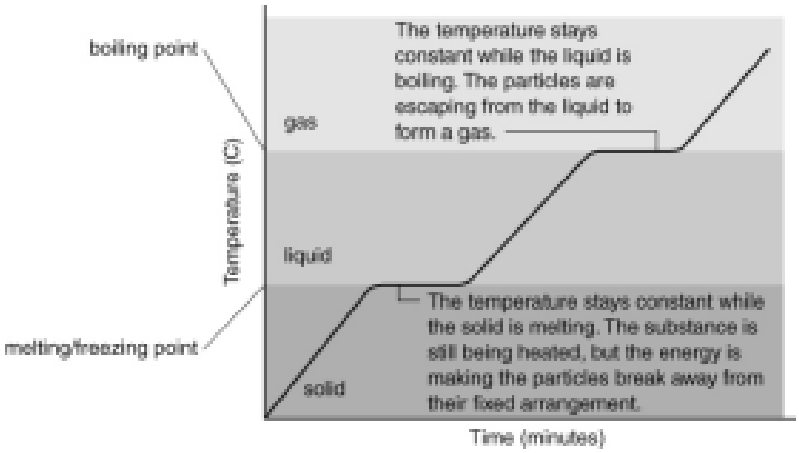
The melting point and the freezing point of a substance are the same temperature. The temperature of a substance does not change while it is melting, even if it is still being heated.



Changing density

Substances expand when they are heated. The particles in a solid vibrate more and take up more space. The particles in liquids and gases move around faster and take up more space. When a material expands its density decreases.

Substances contract when they cool down, as the particles have less energy and do not move as much. This reduces the volume and increases the density. When a liquid freezes and becomes a solid its density increases a lot.

Ice is unusual, because it is *less* dense than liquid water. This is why ice floats on water.

Pressure in fluids

Both gases and liquids are fluids. Fluids can flow. Pressure in fluids acts in all directions. The particles in fluids are moving all the time and hitting the walls of containers and other things they come into contact with. The force of the collisions causes pressure, which acts in all directions.

The pressure of gas in a container can be increased by:

- putting more particles into the container (so there will be more collisions with the container walls each second).
- heating the gas (so the particles move faster, hitting the walls harder and more often).
- reducing the volume of the container (so the particles do not have as far to go between the walls and so collide with the walls more often).

As you go deeper into the sea, pressure increases because there is more water above you pressing down. If you climb a high mountain, the air pressure on you will get less, because there is less air above you pressing down.

Floating and sinking

You can decide if something will float by working out its density, and the density of the fluid. If the density of the object is less than the density of the fluid, it will float.

The density of water is 1 g/cm^3, so objects with densities less than 1 g/cm^3 will float in water.

Drag

Drag is another name for air resistance or water resistance. The amount of drag on something can be reduced by giving it a smooth surface and a streamlined shape. The drag increases as the speed increases, so cars use up more fuel per kilometre when they are travelling fast. Drag is caused by particles in the fluid hitting the moving object, and by the force needed for the object to push the fluid out of the way. The particles transfer energy to the object, which is why objects moving through air can get hot.