



Wadham School



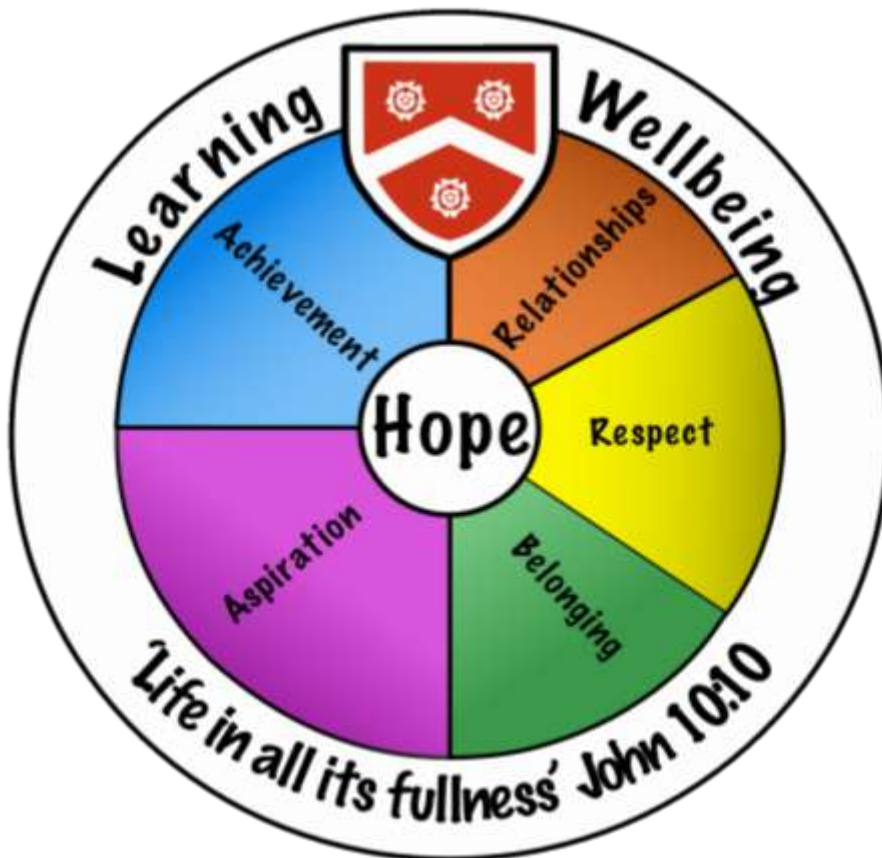
A Church of England Community School

Knowledge Organisers

Year 7

Term 3 & 4

2024-2025



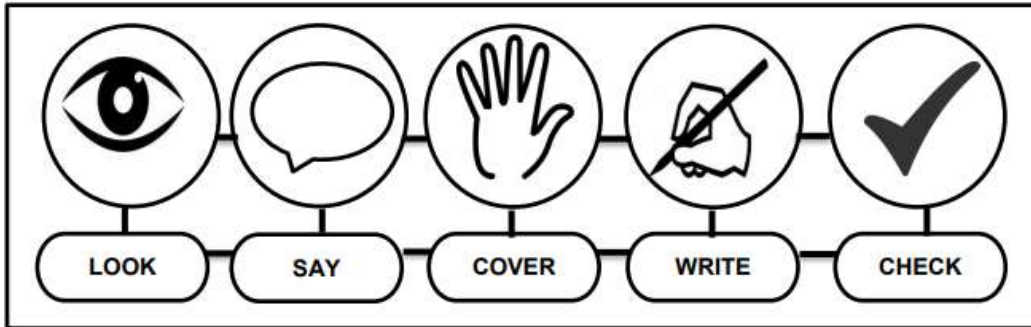
Name.....

Tutor group.....

“Life in all its fullness” John 10:10



Using Your Knowledge Organiser



Look-Say-Cover-Write-Check

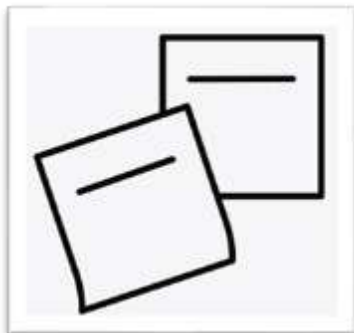
Retrieval practice using the look-say-cover-write-check technique, when done in regular small chunks, is one of the best ways you can learn relevant knowledge over time.

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



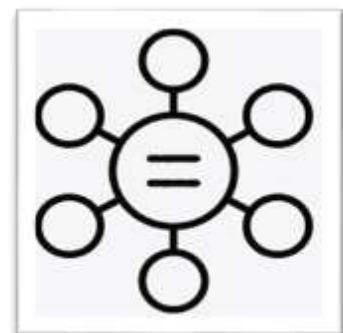
Self Quizzing

Write quizzes with answers to test yourself in the future.






Mind maps

Create mindmaps linking key information you need to remember.



Art


1. Colour theory

	Primary Colours - Red, blue, yellow. They cannot be made by mixing other colours together. All other colours can be mixed apart from red, yellow and blue. Primary colours are used by artists because they are bold and striking.
	Secondary colours - Orange, purple, green. Made by mixing equal amounts of primary colours together. On the colour wheel, each secondary colour sits halfway between the two primary colours it is mixed from.
	Tertiary colours - Red-orange, yellow-orange, red-purple, blue-purple, blue-green, yellow-green, red-purple. Made by mixing equal amounts of a primary colour and a secondary colour together. On the colour wheel, they sit between the primary and secondary colour they are mixed from.
cool colours	Green, blue and purple. Are said to <i>recede</i> into the background. Can be calming and relaxing, but also signify sadness.
warm colours	Red, orange, yellow. Are said to <i>advance</i> towards you as if they are jumping out of the painting. These colours can be exciting and energetic and will catch the viewer's attention.
complementary colours	These are opposite to each other on the colour wheel e.g. blue and orange. When complementary colours are placed next to each other, a very strong contrast is created. The colours appear more <i>vivid</i> .

2. Colour in landscapes, Andre Derain

Who?	Andre Derain 1880-1954
Where?	Born in France. Derain's paintings were of landscapes from different countries.
Art movement	Fauvism. The Fauves were interested in scientific colour theories, especially complementary colours.
Technique	In Derain's painted landscapes we can see a technique where Derain dabbed the paint to create loose dabs of paint.
Historical events that happened during Derain's lifetime	1901- Death of Queen Victoria 1909- Pablo Picasso and Georges Braque developed Cubism 1914-1918 – World War 1 1939-1945 – World War 2

3. Key terms in Derain's painting

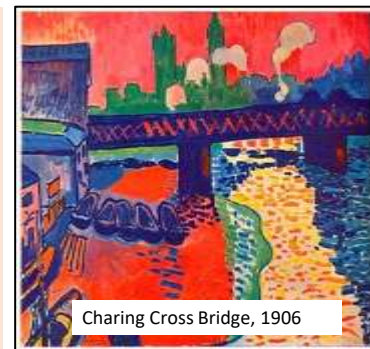


Background – The part of a picture, scene, or design that forms a setting for the main figures or objects, or appears furthest from the viewer.

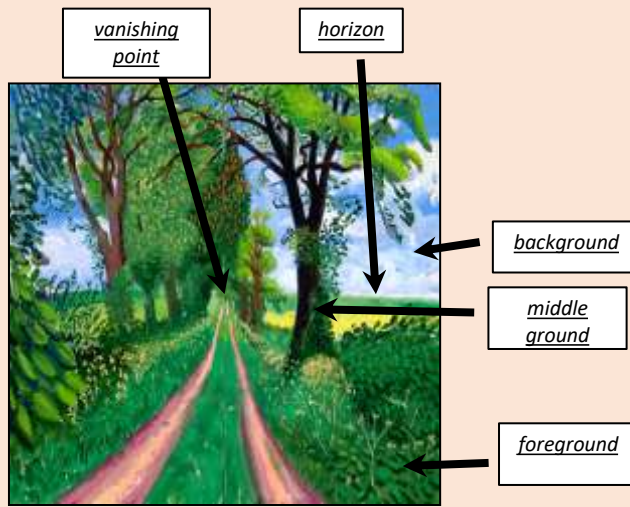
Middle ground – The middle distance of a painting or photograph.

Foreground – The part of a view that is nearest to the observer, especially in a picture or photograph.

Landscape at Collioure, 1905



1. David Hockney's landscape



Late Spring Tunnel – David Hockney

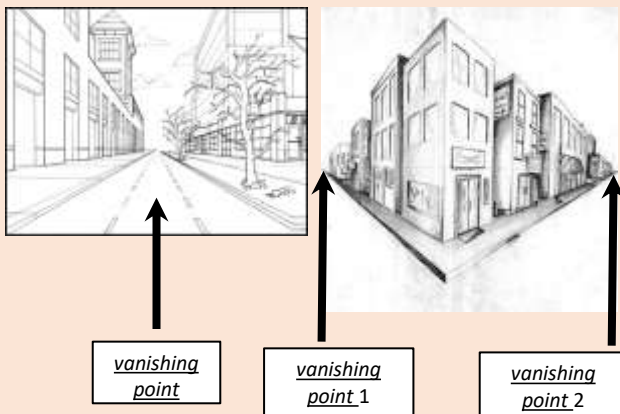
2. Who is David Hockney?

Born:	9 th July 1937, England
Inspiration:	Inspired by 2 famous artists Pablo Picasso and Henri Matisse
Materials Hockney uses:	Drawing, paints, photography, digital art
Fun fact:	He is considered one of the most influential British artists of the 20 th century

4. Key terms

<u>foreground</u>	The part of a view that is nearest to the observer, especially in a picture or photograph.
<u>middle ground</u>	The middle distance of a painting or photograph.
<u>background</u>	The part of a picture, scene, or design that forms a setting for the main figures or objects, or appears furthest from the viewer.
<u>vanishing point</u>	The point at which receding parallel lines viewed in perspective appear to converge.
<u>horizon</u>	The line at which the earth's surface and the sky appear to meet.

3. 1 point and 2 point perspective



Beliefs and World Views

Beliefs and Worldviews – Year 7 Term 3 & 4

Topic 2: Creation

1	Creation	Creating of the universe
2	Creator	One who creates the universe (e.g <i>God</i>)
3	Genesis	First book in the Bible, contains creation story
4	Big Bang	Theory on the origin of the universe
5	Evolution	Process of life developing over millions of years
8	Chance	Atheists believe the universe was created by chance – there is no creator

9	Liberal	Interpreted as a 'metaphor'
10	Metaphor	Symbolic language with double meaning
11	Literal	God using evolution as his process of creating life.
12	Creationism	Name for literal belief God created in 6 x 24 hour days

9	Shiva	God of destruction
10	Destruction	Removal of the old to make way for the new
11	Preservation	Maintaining and looking after creation
12	Brahman	Creator God – Four Faces and Four arms

Topic 3: The Story of the Prophets

1	Abraham	Founder of Judaism and the first Prophet – began the covenant
2	Prophet	Messenger of God
3	Covenant	' <i>Promise</i> ' between God and Abraham. Abraham would follow Gods law and return be blessed with the Promised Land and descendants.

4	Joseph	Sold into slavery by his brothers but began a powerful ruler in Egypt
5	Exile	Living in Captivity in another country. The Jews were exile in Egypt
6	Dreams	People believed God spoke through dreams, Joseph interpreted them

7	Moses	Leads the Israelites out of Egypt and into the Promised Land
8	Exodus	The Israelites leaving slavery in Egypt after God sends 10 plagues
9	Promised Land	Israel – A land flowing with milk and honey, promised to Abraham
10	Justice	Fair treatment – The plagues were needed as justice for Egypt's sins
11	Law	A set of rules to live morally and please God
12	10 Commandments	Ten very important Rules, written on tablets of stone

13	David	King who led Israel through a time of victory and prosperity
14	Prosperity	Increasing in wealth and power

15	Isaiah	Promises Israel would be restored to Glory & the Promised Land
16	Prophecy	Message given by a prophet, from God, about the future
17	Messiah	Promised ruler who would restore and fix Israel

Computing Year 7

Year 7 Introduction to Computers Knowledge Organiser

Computer System

A basic, **complete**, and **functional** computer.

It will include all the hardware and software required to make it functional

INPUT → PROCESS → OUTPUT

Hardware

Computer hardware refers to the **physical parts of a computer and related devices**.

Internal hardware devices include motherboards, hard drives, and RAM.

Computer Components



Types of Computer Storage

Storage is a **mechanism that enables a computer to retain data**, either temporarily or permanently. Storage is among the key components of a computer system and can be classified into several forms, although the types we cover are:

Internal Storage:

Most often refers to a **computer's internal** hard drive. This is the primary storage device used to store a user's files and applications. The computer's internal memory, **RAM (Random Access Memory)** and **ROM (Read Only Memory)** is also classed as internal storage.



External Storage:

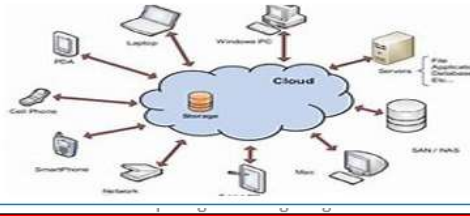
Commonly referred to as an external drive, external storage is storage that's not part of the internal parts of a computer. These drives often connect to the computer using a connection, such as USB (Universal Serial Bus).



Common types of external storage are **Flash Drives (USB Sticks)** and **DVDs**.

Cloud Storage

Cloud storage is a cloud computing model in which data is stored on remote servers accessed from the internet, or "cloud".



Software

Computer software refers to the programs and other operating information used by a computer.

The main piece of software on a computer is the

Operating System

The part of the operating system we see on screen is known as the User Interface.

- Graphical User Interface (GUI).
The most popular type of system. They combine menu driven interfaces with icons.
- Command Line Interface (CLI).
Users need to learn the commands to make it work.
- Menu Driven Interface.
A list of options organised under various headings or menus

Most used Operating Systems (OS)

- Microsoft – Windows
- Apple – iOS
- Google - Android



Year 7 Online Safety Knowledge Organiser

E-safety

E-safety refers to staying safe online, this includes the use of the internet, social media sites and gaming.

Top tips for staying safe online:

1. Do not talk to strangers
2. Do not give out personal information
3. Make sure all social media accounts are set to private.
4. Do not meet anyone online.

Cyberbullying

Cyberbullying is "**bullying for the 21st century, using email, text messages and the internet.**" (Richard Aedy, ABC Radio National)

Flaming

Flaming is the online act of posting insults, often laced with profanity or other offensive language on social networking sites.

Cyber Stalking

Cyberstalking is the use of the Internet or other electronic means to stalk or harass an individual, group, or organization.

Masquerading

Masquerading is an elaborate form of cyberbullying where the **bully** pretends to be someone who they are not. They might create fake email addresses or instant messaging names, or they might use someone else's email or mobile phone to bully someone.

Malware

Malware is software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system. There are several different types of **malware**.

Viruses

A virus can be defined a piece of code which is capable of copying itself and typically has a detrimental effect, such as corrupting the system or destroying data.

Worms

A worm can be defined as a self-replicating program able to propagate itself across a network, typically having a detrimental effect.

Trojan Horses

A Trojan horse, or trojan, can be defined, as any malware which misleads users of its true intent. The term is derived from the Ancient Greek story of the deceptive Trojan Horse that led to the fall of the city of Troy.

Spyware

Spyware can be defined as a piece of software that is installed in a computer without the user's knowledge and transmits information about the user's computer activities over the Internet.

Write down three things you will do to stay safe online

1.

2.

3.



10 Malware Protection Tips



1. Keep your operating system up to date. Always use the latest software version available. Out-dated programs often suffer from severe security vulnerabilities, which hackers take advantage of.
2. Install a firewall to ward off threats.
3. Use a virus scanner program to detect and reject possible security threats.
4. Create passwords that are at least 12 characters long. Longer passwords are harder to crack. In fact, the length of the password is more important than the use of special characters.
5. Choose a unique password for each of your digital accounts.
6. Only open emails from trusted senders. If you open a dubious looking email, do not click any links, and delete it straight away.
7. Never pass on personal data such as account or credit card data using email.
8. Use a trusted email provider and always send sensitive data encrypted.
9. Do not use public WLAN routers (unencrypted wireless networks).
10. Only install programs from trustworthy sources.









Materials

Softwoods	From coniferous trees. These often have pines or needles, and they stay evergreen all year round - they do not lose leaves in the autumn. They are faster growing than hardwoods, making them cheaper to buy, and are considered a sustainable material.	Examples of softwoods are: Pine Cedar Redwood Spruce
Hardwoods	From deciduous trees, which have large flat leaves that fall in the autumn. Hardwoods take longer to grow, are not easily sourced and are expensive to buy.	Examples of hardwoods are: Beech Oak Teak Walnut
Manufactured board	A man made material created by pressing and bonding timbers together.	Examples of manufactured board: Plywood Chipboard

Keywords

Isometric drawing	A three dimensional drawing technique.
Brief	Is information given to a designer from a client.
Specification	Is the criteria for a designer to work from.
Shaping	A process using tools to shape material.
Joining	Attaching one material to another.
Plan of production	An ordered list of how a product will be made.
Evaluation	A reflection on how a product has been made, to improve future products.

Tools and Equipment

Coping Saw		A saw used to create curves and complex shapes in woods, metals and plastics.
Tenon Saw		A saw used to cut straight lines in wood.
Steel rule		An accurate tool for measuring and marking out.
Try Square		To check and mark right angles.
File		Used for shaping woods, metals and plastics.
Glass paper		Used to smooth the edges of wood.

Drama

A. Drama Key Words

Body language	Body language is communication by movement or position, particularly facial expressions, gestures and the relative positions of characters.
Facial expressions	conveys an emotion that tells us expressions about the character and the way they react to a situation.
Gesture	a body movement that conveys meaning, think of a wagging finger to tell someone off.
Proxemics	how the actors/characters are placed on a stage. The distance or level between character/actors shows their relationships and feelings.
Levels	create visual interest. Levels can be used to suggest status - meaning the power or authority one character has over another
Corpsing	To lose focus and come out of role often to giggle.
Still Image/ Freeze Frame	A still image is a frozen moment on stage where the characters stay still to clearly stop the play and show the audience a moment in time. It is often used to highlight something important that has happened.
Mime	using movements of your hands and body, and expressions on your face, without speech, to communicate emotions and actions or to tell a story
Point of focus	What you would like your audience to notice in a scene

The Five Things:

- 1- Facial Expressions
- 2- Eye contact
- 3- Create one point of focus
- 4- Use Levels
- 5- Where are your audience

BACKSTAGE

UP STAGE RIGHT USR	UPSTAGE US	UP STAGE LEFT USL
STAGE RIGHT SR	CENTER STAGE US	STAGE LEFT SL
DOWN STAGE RIGHT DSR	DOWNSTAGE DS	DOWN STAGE LEFT DSL

HOUSE LEFT

AUDIENCE (HOUSE)

HOUSE RIGHT

English

The Tempest

Key Characters



PROSPERO



MIRANDA



ARIEL



KING ALONSO



FERDINAND



GONZALO



SEBASTIAN



ANTONIO



STEPHANO



TRINCULO



CALIBAN

Some Key Techniques

- **acts:** the main sections in a play; Shakespeare's plays tend to have five acts
- **scenes:** parts of the play which stay in the same place at the same time; like chapters in a book
- **character:** the "people" within the play
- **characterisation:** how Shakespeare creates a sense of his characters
- **aside:** when a character briefly says something which the audience hears but other characters do not
- **soliloquy:** a speech delivered by a single character alone on stage; they often give the audience a privileged insight into the character's thoughts and feelings
- **imagery:** language not used literally; eg metaphors, similes, personification, symbols
- **pathos:** feelings of pity and sympathy
- **subplot:** a secondary plot in the play, adding complications and extra obstacles in the way

Some Useful Words & Phrases

- **exploitation:** (noun) using someone—often selfishly—for your own benefits eg Caliban feels exploited by Prospero
- **enslaved:** (adjective/verb) made into a slave; eg did Prospero enslave Caliban or help him?
- **retribution:** (noun) payback for something someone did to you; eg Prospero wants retribution from Alonso
- **usurp:** (verb) to take over someone else's kingdom by force
- **servitude:** (noun) slavery; eg Caliban and Ariel might feel they are in a state of servitude

Some Context

- The play was first performed in 1611. King James I was on the throne, and the play was used as part of the celebrations of his daughter Elizabeth's marriage.
- At the time, Britain was setting up colonies in North America and meeting the original inhabitants. Many of the characters in the play have ideas about how to rule the island.
- The play may look at ideas of "colonisation" - where European countries took over foreign countries and tried to "civilise" the "savages" they found (often actually just exploiting them).
- There had been an essay "Of the Cannibals" by the French writer Montaigne. This looked at the original peoples of South America. "Caliban" may well come from this.

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...

Nature Poetry & Shakespeare

Key words	Definition
Sonnet	A type of love poem with 14 lines.
Transcendent	Going beyond mortal.
Romanticism	A cultural movement which valued nature.
Detachment	Being separated from others.
Zoomorphism/anthropomorphism	Types of personification – giving humans animal qualities
Divinity	Considering things to do with God or gods
Corruption	The damaging or ruining of something.
Soliloquy	A speech in a play delivered only for the audience to hear.
Supernatural	Things that are beyond normal like magic.
Colonialism	The idea of a country taking over another place.
Patriarchy	A male dominated society.

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.

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Coraline

Key words	Definition
Genre	A category of literature – Coraline is fantasy
Fantasy	Stories based in supernatural or improbable things
Familial relationships	Family links – these are strained at the start of Coraline
Trauma	A deeply distressing or disturbing experience that has a lasting impact
Gothic	A genre that deals with dark, mysterious and often supernatural ideas
Protagonist	The main character. Coraline is the protagonist
Trope	Something that often occurs in a particular genre
Beldam	An old-fashioned term for a hag or terrifying woman.

Food

1	Food choice	<p>Planning what to cook: Deciding on what to cook or eat requires making a number of decisions:</p> <ul style="list-style-type: none"> individual energy and nutrient needs; diet and health; religion and culture; time of day and occasion; food preferences; social considerations; Cost of food food availability advertising and other point of sale information environmental considerations;
2	Bread roll	<p>skills linked to making bread - mixing, kneading, shaping, proving, glazing, baking, testing for readiness</p> <p>Types of bread: White bread, whole-wheat bread, Rye bread, Sourdough bread, Multigrain bread, Baguette, Ciabatta</p> <p>Dough- mixture of dry ingredients that is mixed, kneaded and baked</p>
3	Presentation skills	<p>knife skills:</p> <p style="text-align: center;">Bridge Hold  Claw hold </p> <p>Vegetable cuts: Carrot cuts. These cuts are often seen in recipes such as stir fry</p> <div style="display: flex; justify-content: space-around; text-align: center;"> <div data-bbox="614 777 735 911">  batons 5-6.5cm long x 1 cm square </div> <div data-bbox="785 777 906 911">  dice 1cm square </div> <div data-bbox="928 777 1049 911">  julienne/match 5-6.5cm long x 3 mm square </div> <div data-bbox="1071 777 1192 911">  fine julienne 5-6.5cm long x 1.5mm square </div> </div>
4	<p>Flavouring</p>    	<p>Senses: Sight, smell, hearing, taste (sweet, salt, sour, bitter, umami) and touch are all used when eating food and drink. A combination of these senses helps to evaluate a food</p> <p>Sensory attributes: Words used to describe the appearance, odour, taste and texture of a food product</p> <p>Sensory evaluation: Analyses and measures human responses to food and drink.</p> <p>Sensory analysis: evaluating consumer products</p> <p>Appetising: looks or smells like it would taste delicious</p> <p>seasoning -- salt, herbs, or spices added to food to enhance the flavour</p> <hr/> <p>Modifying a recipe: ingredients are substituted or altered meaning that the colour, flavour, texture and nutritional value is altered.</p> <ul style="list-style-type: none"> To meet the needs of different groups of people e.g. vegetarian. To reduce the cost of a recipe. To avoid certain foods because of intolerance or allergy. Reducing the energy content. Improving the nutritional value/balance (nutritional content or profile) e.g. reducing salt content. Ingredients are unavailable. To cater for like and dislikes
5	<p>Nutritional needs of young people</p> 	<p>Nutritional needs vary depending on life stages - pregnancy, infancy and childhood, adolescence, adulthood, later adulthood;</p> <p>Eatwell guide: We all need a balanced and varied diet to stay healthy. carbohydrates - energy; protein - growth and repair; Fruit and vegetables - Vitamins and minerals - provide protection from illness and disease; calcium - strong bones and teeth; Fat - energy, warmth, protection.</p> <p>We should follow the 8 tips for healthier eating</p> <p>Adolescence - a time of rapid growth and development</p> <p>Boys need more protein and energy than girls for growth.</p> <p>Girls need more iron than boys to replace menstrual losses</p>



Le temps	Weather
1. Quel temps fait-il?	<i>What's the weather like?</i>
2. Il fait beau.	<i>The weather's fine.</i>
3. Il fait mauvais.	<i>The weather's bad.</i>
4. Il fait chaud.	<i>It's hot.</i>
5. Il fait froid.	<i>It's cold.</i>
6. Il y a du soleil.	<i>It's sunny.</i>
7. Il y a du vent.	<i>It's windy.</i>
8. Il pleut.	<i>It's raining.</i>
9. Il neige.	<i>It's snowing.</i>
10. au printemps	<i>in spring</i>
11. en été	<i>in Summer</i>
12. en automne	<i>in Autumn</i>
13. en hiver	<i>in Winter</i>
14. quand	<i>when</i>

Les activités	Activities
29. Je fais...	<i>I do/go...</i>
30. du skate	<i>skateboarding</i>
31. du patin à glace	<i>Ice skating</i>
32. du vélo	<i>cycling</i>
33. du judo	<i>judo</i>
34. du théâtre	<i>drama</i>
35. de la cuisine	<i>cooking</i>
36. de la danse	<i>dancing</i>
37. de la gymnastique	<i>gymnastics</i>
38. de la natation	<i>swimming</i>
39. de l'athlétisme	<i>athletics</i>
40. de l'équitation	<i>horse riding</i>
41. des randonnées	<i>hiking</i>

Les sports	Sports
15. Je joue...	<i>I play...</i>
16. au basket	<i>basketball</i>
17. au billard	<i>pool</i>
18. au football	<i>football</i>
19. au rugby	<i>rugby</i>
20. au hockey	<i>hockey</i>
21. au tennis	<i>tennis</i>
22. au volleyball	<i>volleyball</i>
23. à la pétanque	<i>boules</i>
24. aux cartes	<i>cards</i>
25. aux échecs	<i>chess</i>
26. Je suis...	<i>I am...</i>
27. Je ne suis pas...	<i>I am not...</i>
28. sportif/sportive	<i>sporty</i>

La technologie	Technology
42. J'aime...	<i>I like...</i>
43. Je n'aime pas...	<i>I don't like...</i>
44. J'adore...	<i>I love...</i>
45. Je déteste...	<i>I hate...</i>
46. bloguer	<i>blogging</i>
47. écouter de la musique	<i>listening to music</i>
48. envoyer des SMS	<i>sending texts</i>
49. prendre des selfies	<i>taking selfies</i>
50. partager des photos	<i>sharing photos</i>
51. regarder des films	<i>watching films</i>
52. tchatter avec mes copains/copines	<i>chatting with my friends</i>
53. télécharger des chansons	<i>downloading songs</i>

Phonics Focus:	
[u] = /oo/ <i>sal<u>u</u>t</i>	[e] = /uh/ <i>pe<u>t</u>it</i>
[ç] = /s/ <i>Ç<u>a</u> va?</i>	[qu] = /kuh/ <i>mu<u>s</u>ique</i>

Vital verb: jouer (to play)	
Le présent	Present tense
<i>Je joue</i>	<i>I play</i>
<i>Tu joues</i>	<i>You play</i>
<i>Il/elle/on joue</i>	<i>He/she/we play</i>
<i>Nous jouons</i>	<i>We play</i>
<i>Vous jouez</i>	<i>You play (formal/plural)</i>
<i>Ils/elles jouent</i>	<i>They play</i>



Geography



Rainforests - Knowledge Organiser *(Geography focus)*

Here are some key facts that you will need to know about our mission in the Spring term.









Rainforest Key Facts

- South America is a **continent** made up of many countries including **Brazil** (capital - Brasilia), **Venezuela** (capital - Caracas), **Colombia** (capital - Bogota), **Peru** (capital - Lima), **Argentina** (capital - Buenos Aires) and **Chile** (capital—Santiago).
- The Andes is the world's longest mountain range. Machu Picchu is a citadel which can be found high up here. 
- The climate in the rainforest is the same all year round (hot & humid). The average rainfall is 6cm each month and it usually rains every day.
- Angel Falls is the world's highest uninterrupted waterfall, located in Venezuela. 
- Tropical rainforests are found near to the equator between the tropic of Cancer and the tropic of Capricorn.
- Rainforests can be found in every continent except Antarctica.

Key Vocabulary

- climate** - The average weather conditions over a long period of time.
- deforestation** - The cutting down and clearing of forests.
- equator** - An imaginary circle running around the centre of the Earth to divide the northern and southern hemispheres.
- humid** - Feeling damp due to water vapour in the air.
- native tribes** - The original settlers of an area.
- species** - A group of similar animals or plants.

Rainforests

Emergent Layer	Canopy Layer	Understory Layer	Forest Floor
			
Trees can be up to 60m tall	Trees form a roof over the plants below	Trees grow to less than 4m tall	Very few plants
Lots of sunlight	Lots of sunlight but also plenty of rain	Very little sunlight	Almost no sunlight
Cold and windy	Lots of food for animals	Warm and humid	Leaves and debris decompose quickly
Birds, bats, monkeys and butterflies	Snakes, toucans and tree frogs	Lots of insects	Gorillas, anteaters, leopards and tigers
			

What can be done to protect the Rainforest?

- ⇒ Use both sides of a piece of paper, and use pencils until they are stubs.
- ⇒ Use ebooks or a library rather than buying new books.
- ⇒ Turn off lights and electrical items when not in use.
- ⇒ Buy Fairtrade fruit, vegetables, chocolate and coffee.





What I should already know?:



The country I live in is called **England** which is part of the **United Kingdom**. The United Kingdom is made up of England, Scotland, Wales and Northern Ireland.

A continent is a very large area of land consisting of many countries. There are seven continents (Asia, Africa, North America, South America, Antarctica, Europe, Australia). I can locate them on a world map.

What I will know by the end of the unit:

Ocean definition: One of the five very large areas of salt water on the Earth's surface

Sea definition: A large area of salty water that is part of an ocean

There are different types of sea: 1) enclosed by land, 2) enclosed between land and sea

5 Oceans

Order by size (below is from largest to smallest)

- Pacific Ocean**
- Atlantic Ocean**
- Indian Ocean**
- Southern Ocean**
- Arctic Ocean**



Bio-luminescent: is the capacity of living things to make light. Bio-luminescent is mainly a marine phenomenon.



Oceans cover 70% of our earth.

Oceans are

important for:

- Animal habitats
- Oxygen
- Food
- Medicine
- Weather patterns
- Transportation

Geographical skills and fieldwork

- Find the five Oceans of the world using Map skills.
- Use the continents to locate the oceans.
- describe how the ocean is different at the North Pole and the Equator.
- Campaign to protect the oceans by creating a video.
- Describe the features of a map and different types of maps

The oceans are under threat due to:

- Pollution, overfishing and global warming.**
- Plastic and other rubbish** harms marine animals and enters the food chain.
- Overfishing** damages the sea bed, and harms fragile ecosystems.
- Global warming** causes the marine environment to become more acidic and harms sea life.



VOCABULARY

Coral reef	a ridge of rock in the sea formed by the growth coral
Oyster reef	A large number of oysters grouped together in a colony
Kelp forest	A marine ecosystem where kelp grows like an underwater forest
Equator	The Equator is an <i>imaginary circle around Earth</i> . It divides Earth into two equal parts: the Northern Hemisphere and the Southern
Mammal	A mammal is an animal that breathes air, has a backbone, and grows hair at some point during its life e.g. whale, dolphin, seal
Mollusc	Molluscs are a group of animals with soft bodies e.g. A squid, octopus
Crustacean	Crustaceans are animals that usually have a hard covering, or exoskeleton, and two pairs of antennae, or feelers. E.g. crayfish, lobster
Fish	Aquatic animals that have gills.
Pollution	The presence of a harmful or poisonous substance within an



Sport	Sports
1. Ich spiele gern...	<i>I like playing...</i>
2. Ich spiele nicht gern...	<i>I don't like playing...</i>
3. Basketball	<i>basketball</i>
4. Fußball	<i>football</i>
5. Badminton	<i>badminton</i>
6. Eishockey	<i>Ice hockey</i>
7. Tennis	<i>tennis</i>
8. Volleyball	<i>volleyball</i>
9. Handball	<i>handball</i>
10. Wasserball	<i>water polo</i>
11. Tischtennis	<i>table tennis</i>
12. Ich bin (ziemlich)...	<i>I am (quite)...</i>
13. Ich bin nicht (sehr)...	<i>I am not (very)...</i>
14. sportlich	<i>sporty</i>

Meinungen	Opinions
27. Ich finde es...	<i>I find it...</i>
28. irre	<i>amazing</i>
29. toll	<i>great</i>
30. gut	<i>good</i>
31. nicht schlecht	<i>not bad</i>
32. langweilig	<i>boring</i>
33. nervig	<i>annoying</i>
34. stinklangweilig	<i>deadly boring</i>
35. furchtbar	<i>awful</i>

Was machst du gern?	What do you like doing?
15. Ich fahre Rad.	<i>I ride my bike.</i>
16. Ich fahre Skateboard.	<i>I go skateboarding.</i>
17. Ich fahre Ski.	<i>I ski.</i>
18. Ich fahre Snowboard.	<i>I snowboard.</i>
19. Ich lese.	<i>I read.</i>
20. Ich mache Judo.	<i>I do judo.</i>
21. Ich mache Karate.	<i>I do karate.</i>
22. Ich reite.	<i>I go horse riding.</i>
23. Ich schwimme.	<i>I swim.</i>
24. Ich sehe fern.	<i>I watch TV.</i>
25. Ich spiele Gitarre.	<i>I play the guitar.</i>
26. Ich tanze.	<i>I dance.</i>

Freizeit	Free time
36. Ich chille...	<i>I chill out.</i>
37. Ich esse Pizza.	<i>I eat pizza.</i>
38. Ich gehe einkaufen.	<i>I go shopping.</i>
39. Ich gehe ins Kino.	<i>I go to the cinema.</i>
40. Ich gehe in die Stadt.	<i>I go into town.</i>
41. Ich gehe ins Park.	<i>I go to the park.</i>
42. Ich höre Musik.	<i>I listen to music.</i>
43. Ich mache Sport.	<i>I do sport.</i>
44. Ich spiele Xbox.	<i>I play Xbox.</i>

Online	Online
45. Ich chatte auf Facebook.	<i>I chat on Facebook.</i>
46. Ich lade Musik herunter.	<i>I download music.</i>
47. Ich mache Fotos.	<i>I take photos.</i>
48. Ich sehe Videos.	<i>I watch videos.</i>
49. Ich simse.	<i>I text.</i>
50. Ich surfe im Internet.	<i>I surf the internet.</i>
51. Ich telefoniere mit Freunden.	<i>I call my friends.</i>

Vital verb: spielen (to play)	
Präsens	Present tense
<i>Ich spiele</i>	<i>I play</i>
<i>Du spielst</i>	<i>You play</i>
<i>Er/sie spielt</i>	<i>He/she plays</i>
<i>Wir spielen</i>	<i>We play</i>
<i>Ihr spieltet</i>	<i>You play (plural)</i>
<i>Sie/sie spielen</i>	<i>They/you (formal) play</i>

Phonics Focus:	
[o] long and short	[ö] = /urgh/
<u>V</u> ogel / <u>S</u> ch <u>o</u> l <u>o</u> l <u>a</u> d <u>e</u>	<u>L</u> ö <u>w</u> e
[st] = /st/	[s] = /z/
<u>S</u> terne	<u>S</u> onne

History

Year 7 History: Knowledge Organiser Term 3 + 4, Medieval Life

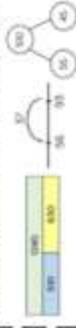
Keyword	Definition
1. Alms	Money or food given to poor people
2. Barber-Surgeon	Someone who could cut your hair and provide minor treatment.
3. Bishops	A bishop is an ordained member of the clergy who is entrusted with a position of authority and oversight in a religious institution.
4. Black Death	Also known as the Bubonic Plague, a disease that killed 1/3rd of the population in 1348-49.
5. Buboos	A swollen inflamed lymph node in the armpit or groin. This would happen when a person caught the bubonic plague
6. Cesspits	A pit where waste would be put
7. Chainmail	What a knight wears for protection.
8. Chivalry	The way a knight was supposed to behave. Knights were expected to be strong, brave and skilled in warfare.
9. Doom painting	A Church illustration of how to get to heaven or hell.
10. Hue and Cry	Medieval policing - if you saw someone committing a crime you had to call out to everyone else is aware. Everyone then has to chase after the thief.
11. Knight	A Lord that has been trained to fight and given land to rule. Knights generally fought on horseback.
12. Lords	Lords swore loyalty to the King and provided him with soldiers. They were given lands to govern, manor houses or Castles to live in and ruled over these areas.
13. Magna Carta	An agreement between King and Barons that guaranteed rights and freedoms for people
14. Medieval	The period of time from about the 5 th century (when the Romans left England) to about the end of the 15 th century (when the Tudors came to power)
15. Monastery	A building or buildings occupied by a community of monks living under religious vows
16. Monks & Nuns	Monks (Men) and Nuns (Women) devoted their life to God. They lived separately from other people in special buildings called Abbeys, Monasteries or Nunneries. Monks and Nuns spent their days praying, singing and writing.
17. Peasants	People who worked as farmers or labourers on land owned by others. 90% of people were peasants. They also had to work for the church for free and pay a tax of 10% of all they grew. Life was very harsh.
18. Peasants Revolt	The rebellion of the working classes in 1381 against an unpopular tax, and in fear of harsh working conditions. Led by Wat Tyler and locally by the Vicar of Bridgwater
19. Privy	Outside toilet.
20. Purgatory	A state of suffering if you have sinned (hell). A place where medieval Christians believed they would be tortured until their had made up for their bad deeds and thoughts. After this, they would go on to heaven.
21. Tanner	The job of making leather.
22. The Pope	The 'Pope' is the title given to the head of the Roman Catholic Church. In Medieval times the Catholic Church was the only church in England.
23. Tithe	1 tenth – this was how much people had to pay the lord, 1 tenth of their possessions.
24. Trial by ordeal	If a local jury could not decide the outcome of a crime, then the villagers would turn to God to decide. An example is Trial by Hot Iron; in this trial, the accused held a red-hot iron or put his hand in a flame. If the wound healed, the accused was deemed innocent.

Maths: 7.06 Solving problems with addition & subtraction.....

Key words	
Commutative	changing the order of the operations does not change the result
Associative	when you add or multiply you can do so regardless of how the numbers <u>are grouped</u>
Inverse	the operation that undoes what <u>was done</u> by the previous operation. (The opposite operation)
Placeholder	a number that occupies a position to give value
Perimeter	the distance/ length around a 2D object
Polygon	a 2D shape made with straight lines
Balance	in financial questions — the amount of money in a bank account
Credit	money that goes into a bank account
Debit	money that leaves a bank account

Sparx codes for this topic	
M928, M347	Add & subtract integers
M429, M152	Add & subtract decimals
M635, M690	Perimeter problems
M901, M681	Finance problems
M963, M899	Timetables & tables
M460, M738	Finance problems

Addition/ Subtraction with integers



Modeling methods for addition/ subtraction

- Bar models
- Number lines
- Part/ Whole diagrams

Addition is commutative



$$6 + 3 = 3 + 6$$

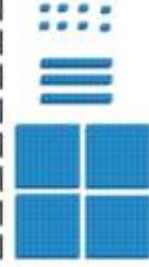
The order of addition does not change the result

Addition/ Subtraction with decimals

4	.	3	8	+
7	.	9	0	+

0 can be used to fill empty places with value.

The decimal place acts as the placeholder and aligns the other values



if represents 1 instead of 100

Revisit Fraction - Decimal equivalence
 $5.43 + 0.8$

Subtraction the order has to stay the same

$$360 - 147 = 360 - 100 - 40 - 7$$

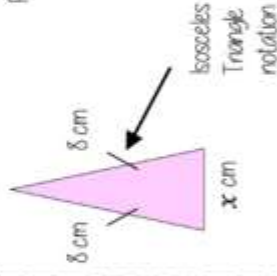
- Number lines help for addition and subtraction

- Working in 10's first aids mental addition/ subtraction

- Show your relationships by writing fact families

Solve problems with perimeter

Perimeter is the length around the outside of a polygon



The triangle has a perimeter of 25cm
 Find the length of x

$$8\text{cm} + 8\text{cm} + x\text{cm} = 25\text{cm}$$

$$16\text{cm} + x\text{cm} = 25\text{cm}$$

$$x\text{cm} = 9\text{cm}$$

Solve problems with finance

Profit = Income - Costs

Credit - Money coming into an account

Debit - Money leaving an account

Money uses a two decimal place system
 14.2 on a calculator represents £14.20

Check the units of currency - work in the same unit

Tables and timetables

Distance tables

London	211	Cardiff	493	Glasgow		Belfast
	518	392	177			

This shows the distance between Glasgow and London

It is where their row and column intersects

Two-way tables

	H	T
H	HH	HT
T	TH	TT

Where rows and columns intersect is the outcome of that action

Bus/ Train timetables

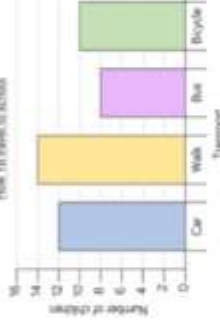
Harton	1005	1045	1130
Bridge	1024	1106	1147
Avile	1051	1133	1205
Ware	1117	1202	1233

Each column represents a journey, each row represents the time the bus arrives at that location

TIME CALCULATIONS - use a number line

Bar and line charts

How 18 travel to school



Use addition/ subtraction methods to extract information from bar charts

e.g. Difference between the number of students who walked and took the bus
 Walk frequency - bus frequency

When describing changes or making predictions

- Extract information from your data source
- Make comparisons of difference or sum of values
- Put into the context of the scenario

Frequency trees

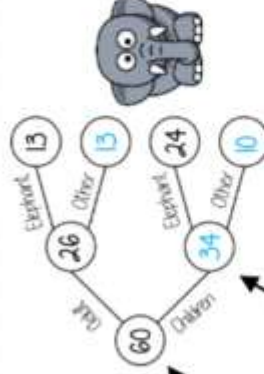
60 people visited the zoo one Saturday morning

26 of them were adults. 13 of the adult's favourite animal was an elephant. 24 of the children's favourite animal was an elephant.

The overall total '60 people'

A frequency tree is made up from part-whole models

One piece of information leads to another



Probabilities or statements can be taken from the completed trees

e.g. 34 children visited the zoo

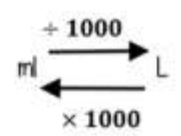
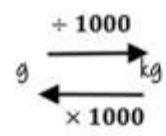
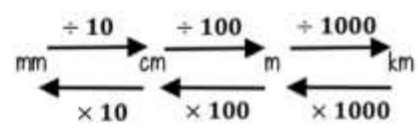
Maths: 7.07 Solving problems with multiplication & division.....

Key words	
Array	an arrangement of items to represent concepts in rows or columns
Multiples	found by multiplying any number by positive integers
Factor	integers that multiply together to get another number
Mili	prefix meaning one thousandth
Centi	prefix meaning one hundredth
Kilo	prefix meaning multiply by 1000
Quotient	the result of a division
Dividend	the number being divided
Divisor	the number we divide by

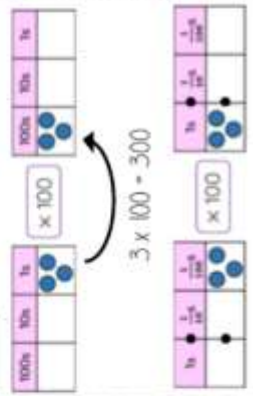
Sparx codes for this topic	
M823	Factors & multiples
M113	Powers of 10
M187, M354	Multiplication & division methods
M772, M865	Metric conversions
M521	Order of operations
M291, M610, M996	Area problems

Metric conversions

Useful Conversions



Multiply/Divide by powers of 10



Repeated multiplication and division by powers of 10 is commutative
 $\div 10$ then $\div 10 \rightarrow \div 100$

Complex division

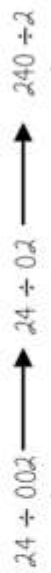
$\div 24 = \div 6 \div 4$
 Break up the divisor using factors

Division methods



Division with decimals

The placeholder in division methods is essential — the decimal lines up on the dividend and the quotient



Always give the same solution as represent the same proportion
 Multiplying the values in proportion until the divisor becomes an integer

Multiples

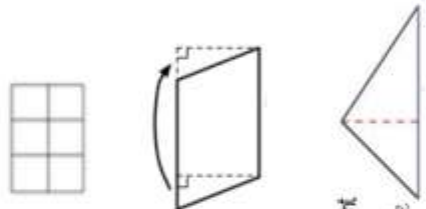


Bar models can represent by something is a multiple. Eg. 20 is a multiple of 4

Lowest Common Multiples

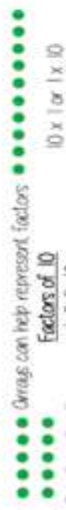


Area problems



A triangle is half the size of the rectangle it would fit in

Factors

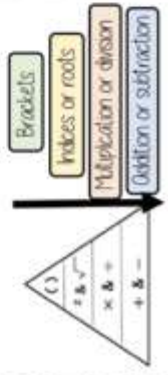


Groups can help represent factors
 Factors of 10: 1, 2, 5, 10
 Factors of 4: 1, 2, 4

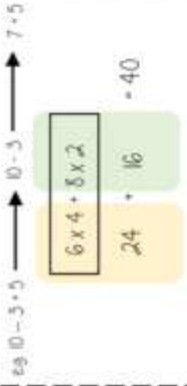
Square numbers have an ODD number of factors

Be strategic
 - Lay factors out in pairs can help you not to miss any

Order of operations



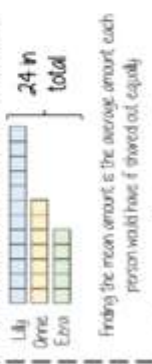
If you have multiple operations from the same bar work from left to right



Mean problems

Mean — a measure of average
 It gives idea of the central value

Lily, Onne and Ezra have the following cubes



Finding the mean amount is the average amount each person would have if shared out equally



The mean number of blocks would be 8 each

Multiplication methods



Less effective method especially for bigger multiplication

Multiplication with decimals

Perform multiplications as integers
 eg. $0.2 \times 0.3 \rightarrow 2 \times 3$

Make adjustments to your answer to match the question $0.2 \times 10 = 2$
 $0.3 \times 10 = 3$

Therefore $6 \div 100 = 0.06$

Estimations: Using estimations allows a "check" if your answer is reasonable

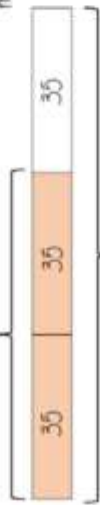
Maths: 7.08 Fractions & percentages of amounts.....

Key words	
Fraction	how many parts of a whole we have
Equivalent	of equal value
Whole	a number with no fractional or decimal part
Percentage	parts per 100 (uses the \div symbol)
Place Value	the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right
Convert	change into an equivalent representation, often fraction to decimal to a percentage cycle

Sparx codes for this topic	
M695, M684	Fraction of a given amount
M695, M684	Use a fraction of an amount
M437	Find the percentage of an amount (Mental methods)
M905	Find the percentage of an amount (Calculator methods)

Use a fraction of amount

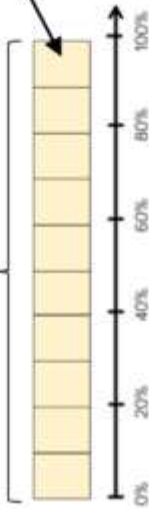
$\frac{2}{3}$ of a value is 70. What is the whole number?
 $70 \div 2 = 35$
 Each part of the bar model represents 35.



$35 \times 3 = 105$
 The whole number is 105

Find the percentage of an amount (Mental methods)

The whole represents 100%
 $10\% = \frac{1}{10}$ of the whole



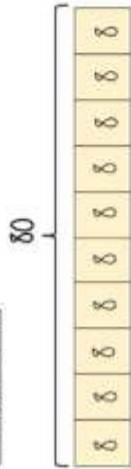
$10\% = \frac{1}{10}$ of the whole $50\% = \frac{5}{10} = \frac{1}{2}$ of the whole

$20\% = \frac{2}{10} = \frac{1}{5}$ of the whole $5\% = \frac{1}{20}$ of the whole

Method 1
 $65\% = 10\% \times 6 + 5\%$
 $= (6 \times 8) + 4$
 $= 52$

Method 2
 $65\% = 50\% + 10\% + 5\%$
 $= 40 + 8 + 4$
 $= 52$

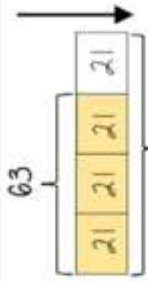
Find 65% of 80



For bigger percentages it is sometimes easier to take away from 100%

The wording of the question is important to setting up the bar model

Find the whole



$\frac{3}{4}$ of a number is 63

What is $\frac{1}{6}$ of the number?

-14

Use the whole to find a given part



Find the percentage of an amount (Calculator methods)



Using a multiplier

Find 65% of 80

$0.65 \times 80 = 52$

Fraction, decimal, percentage conversion

$65\% = \frac{65}{100} = 0.65$ ← The multiplier

Using the percent button

Find 65% of 80

This brings up the $\%$ button on screen
 You will see 65/

Type 65

Press **SHIFT** **(%)**

Press **X** 80 and then press =

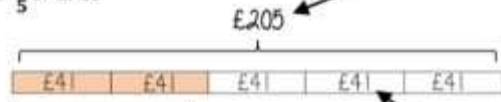
You can also use the calculator to support non calculator methods and find $\frac{1}{3}$ or $\frac{2}{3}$ then add percentages together

'of' can represent 'x' in calculator methods

Fraction of a given amount

The bar represents the whole amount

Find $\frac{2}{5}$ of £205

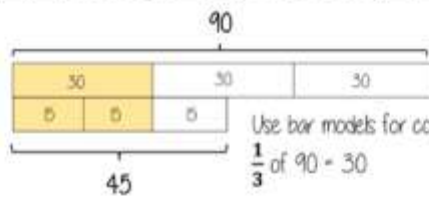


2 out of the 5 equal parts

$2 \times £41 = £82$

$£205 \div 5 = £41$

Each part of the bar model represents £41



Use bar models for comparisons

$\frac{1}{3}$ of 90 = 30

$\frac{2}{3}$ of 45 = 30

$\therefore \frac{1}{3}$ of 90 = $\frac{2}{3}$ of 45

Maths: 7.09 Operations with equations & directed numbers.....

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
Equivalent	of equal value
Mixed numbers	a number with an integer and a proper fraction
Improper fractions	a fraction with a bigger numerator than denominator
Substitute	replace a variable with a numerical value
Place value	the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right

Sparx codes for this topic	
M527	Ordering negative numbers
M106	Add & subtract with negative numbers
M288	Multiply & divide with negative numbers

Odd directed numbers

$2 + -4 = -2$

Zero pair $(-1 + 1 = 0)$

Two -1 's left $= -2$

$8 + -3 = 5$

Partitions

$5 + 3 + -3 = 5$

Partition the value to create a zero pair calculation

Correlation $+ - = -$

Subtract directed numbers

$2 - -1 = 3$

Representation for calculation

Take away one

Start with the representation of 2

Representations $-1 = 1$

"Subtract" - means take away or remove

$2 - -3 = 5$

Correlation $- - = +$

Multiply/ Divide directed numbers

$2 \times -3 = -6$

Two representations of the same calculation

Negative, Negative calculation

The act of making counters into their negative is turning them over

$-2 \times -3 = 6$

Divisors are the inverse operations

Evaluate algebraic expressions

$a = 5$ $b = -4$

$a^2 = 5^2$ $b^2 = (-4)^2$

$a^3 = 25$ $b^3 = 16$

With negative numbers the brackets are important so that it performs -4×-4

Brackets around negative substitutions helps remove calculation errors

$2a - b = 2 \times 5 - (-4) = 10 + 4 = 14$

$3b - 2a = 3(-4) - 2(5) = -12 - 10 = -22$

Perform calculations that cross zero

Number lines are useful to help you visualise the calculation crossing 0

$4 - 6 = -2$

Start at 4

Find the difference between 6 and -4

From 6 to 0: 6

From 0 to -4: 4

10 break between them

10 break between them

Rearrangements of the same equation

$-5 + 5 = 0$

$5 - 5 = 0$

Two-step equations

Bar Model 10

$4x + 2 = 10$

Representing the same question (see fact families)

Function machine

$10 - 4x = 2$

$x \rightarrow x4 \rightarrow +2 \rightarrow 10$

$x \rightarrow x \rightarrow 2$

Inverse operations to find x

Use order of operations

Brackets

Indices or roots

Multiplication or division

Addition or subtraction

Remember square roots have a positive and negative value

Brackets around negative substitutions helps remove calculation errors



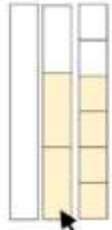
Maths: 7.10 Addition & subtraction of fractions.....

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
Equivalent	of equal value
Mixed numbers	a number with an integer and a proper fraction
Improper fractions	a fraction with a bigger numerator than denominator
Substitute	replace a variable with a numerical value
Place value	the value of a digit depending on its place in a number. In our decimal number system, each place is 10 times bigger than the place to its right

Sparx codes for this topic	
M410	Finding equivalent fractions
M601	Converting between mixed numbers & improper fractions
M835	Add & subtract fractions
M931	Add & subtract mixed numbers
M958	Convert between fractions & decimals

Equivalent fractions

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



Numerator and denominator have the same multiplier

$$\frac{1 \cdot 2}{3 \cdot 2} = \frac{2}{6}$$

Representing Fractions



$$\frac{1}{4}$$

is represented in all the images

$$1 \div 4$$

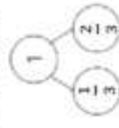
Odd/Subtract fractions

$$\frac{2}{7} + \frac{3}{7} = \frac{5}{7}$$

Some denominator



Sequences

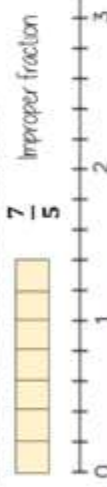


$$1, \frac{1}{3}, 1, \frac{2}{3}, 2, \frac{1}{3}, 3, \dots$$

Represent this on a number line to help

$$\frac{2}{3} + \frac{2}{3}$$

Mixed numbers and fractions



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

In this model 5 parts make up a whole

Fractions can be bigger than a whole

Odd/Subtract unit fractions

$$\frac{1}{12} + \frac{1}{12} = \frac{2}{12} = \frac{1}{6}$$

$$\frac{1}{4} + \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$$

With the same denominator ONLY the numerator is added or subtracted

Some denominator



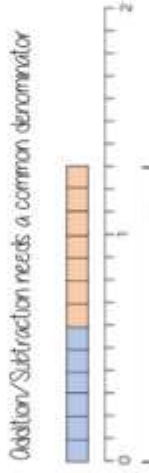
$$\frac{2}{4} = \frac{1}{2}$$

Odd/Subtraction fractions (common multiples)

$$\frac{3}{5} + \frac{7}{10} = \frac{6}{10} + \frac{7}{10} = \frac{13}{10}$$

Addition/Subtraction needs a common denominator

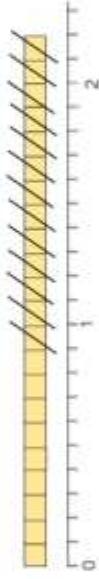
Fractions can be bigger than a whole



$$\frac{13}{10}$$

Odd/Subtraction fractions (improper and mixed)

$$2 \frac{1}{5} - 1 \frac{3}{10} = 2 \frac{2}{10} - 1 \frac{3}{10} = 1 \frac{2}{10} - \frac{3}{10} = \frac{9}{10}$$



Convert to an improper fraction
Calculate with common denominator

Partitioning method

$$2 \frac{1}{5} - 1 \frac{3}{10} = 2 \frac{2}{10} - 1 \frac{3}{10} = 2 \frac{2}{10} - 1 \frac{3}{10} = 1 \frac{2}{10} - \frac{3}{10} = \frac{9}{10}$$

Odd/Subtract from integers

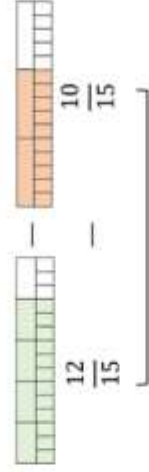
$$1 - \frac{2}{6} = \frac{4}{6}$$

$$3 + \frac{1}{6} = 3 \frac{1}{6}$$

The denominator indicates the number of parts a whole is made up of

Odd/Subtraction any fractions

$$\frac{2}{15}$$



Use equivalent fractions to find a common multiple for both denominators

Fractions in algebraic contexts

$$k - \frac{5}{8} = 2$$

$$\frac{7}{9} + \frac{8}{9}$$

Form expressions with fractions

$$b + \frac{7}{9} \rightarrow b + \frac{7}{9}$$

$$p = 5 \quad m = 2$$

$$\frac{p}{8} + \frac{1}{m}$$

Substitution

$$\frac{5}{8} + \frac{1}{2}$$

Fractions and decimals

$$\frac{1}{10} = 0.1$$

$$\frac{1}{100} = 0.01$$

$$\frac{6}{10} + 0.3 \rightarrow 0.6 + 0.3$$

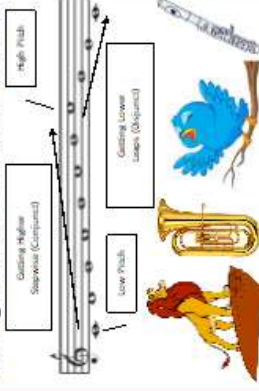
Remember to use equivalent fractions and common denominators

Music

Building Bricks

Melody - Pitch

The **highness** or **lowness** of a sound.



Articulation

How individual notes or sounds are **played/techniques**.



Dynamics

The **volume** of a sound or piece of music.

VERY LOUD: Fortissimo (ff)

LOUD: Forte (f)

QUITE LOUD: Mezzo Forte (mf)

QUITE SOFT: Mezzo Piano (mp)

SOFT: Piano (p)

VERY SOFT: Pianissimo (pp)

GETTING LOUDER: Crescendo (cre)

GETTING SOFTER: Diminuendo (dim.)



Structure

How the music is put together in sections and how often they are repeated

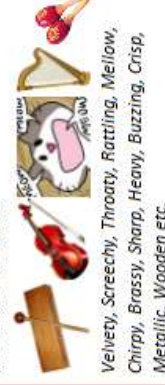
Harmony and Tonality

Harmony refers to the sound that is made when more than one pitch is sounded at the same time, often these are **chords**

Tonality is the key or scale used for a piece of music that gives it colour or character usually **Major or Minor**

Instruments (Timbre/Sonority)

Describes the **unique sound or tone quality** of different instruments voices or sounds.



Rhythm (Duration)

The **length** of a sound.

SHORT → **LONG**



The opposite or absence of sound, **no sound**. In music these are **RESTS**.



Tempo (speed)

The **speed** of a sound or piece of music.

FAST: Allegro, Vivace, Presto SLOW: Andante, Adagio, Lento

GETTING FASTER - Accelerando (accel.)

GETTING SLOWER - Ritardando (rit.) or Rallentando (rall.)

How music is **written** down.

STAFF NOTATION – music written on a **STAVE** (5 lines and spaces)

GRAPHIC NOTATION/SCORE – music written down using shapes and symbols to represent sounds.

Notation



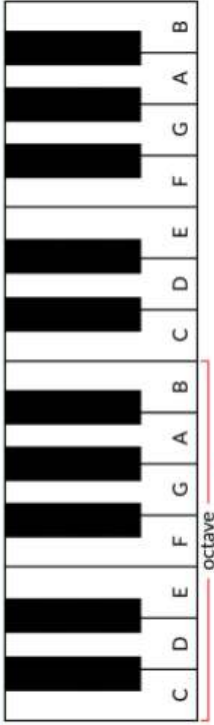
Music

Exploring Treble Clef Reading and Notation



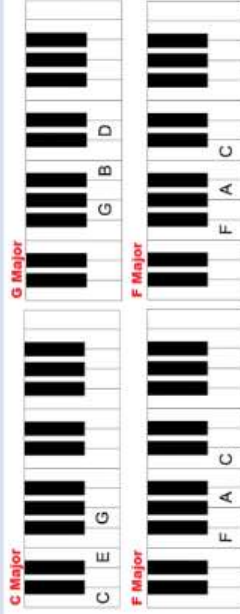
Keyboard Skills

A. Layout of a Keyboard/Piano



A piano or keyboard is laid out with **WHITE KEYS** and **Black Keys** (see section G). C is to the left of the two Black Keys and the notes continue to G then they go back to A again. Notes with the same letter name/pitch are said to be an **OCTAVE** apart. **MIDDLE C** is normally in the centre of a piano keyboard.

C. Keyboard Chords



Play one – Miss one – play one – miss one – play one

D. Left Hand/Right Hand (1-5)



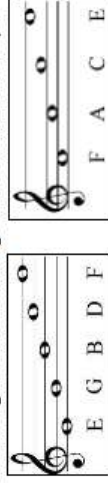
B. Treble Clef & Treble Clef Notation

A **STAVE** or **STAFF** is the name given to the five lines where musical notes are written.

The position of notes on the stave or staff shows their **PITCH** (how high or low a note is). The **TREBLE CLEF** is a symbol used to show high-pitched notes on the stave and is usually used for the right hand on a piano or keyboard to play the **MELODY** and also used by high pitched instruments such as the flute and violin. The stave or staff is made up of 5 **LINES** and 4 **SPACES**.



Every Green Bogie Deserves Flicking. Notes in the SPACES spell "FACE"

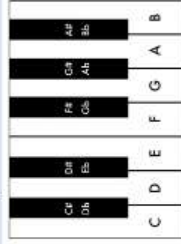


Notes from **MIDDLE C** going up in pitch (all of the white notes) are called a **SCALE**.



E. Black Keys and Sharps and Flats

There are five different black notes or keys on a piano or keyboard. They occur in groups of two and three right up the keyboard in different pitches. Each one can be a **SHARP** or a **FLAT**. The # symbol means a **SHARP** which raises the pitch by a semitone (e.g. C# is higher in pitch (to the right) than C). The b symbol means a **FLAT** which lowers the pitch by a semitone (e.g. Bb is lower in pitch (to the left) than B). Each black key has 2 names – C# is the same as Db – there's just two different ways of looking at it! Remember, black notes or keys that are to the **RIGHT** of a white note are called **SHARPS** and black notes to the **LEFT** of a white note are called **FLATS**.



Define: Stress

A state of mental or emotional strain or tension resulting from adverse or demanding circumstances.

Define: Chronic Stress

The response to emotional pressure suffered for a prolonged period of time in which an individual perceives they have little or no control.

Define: General Anxiety Disorder

A condition characterized by 6 months or more of chronic, exaggerated worry and tension that is unfounded or much more severe than the normal anxiety most people experience.

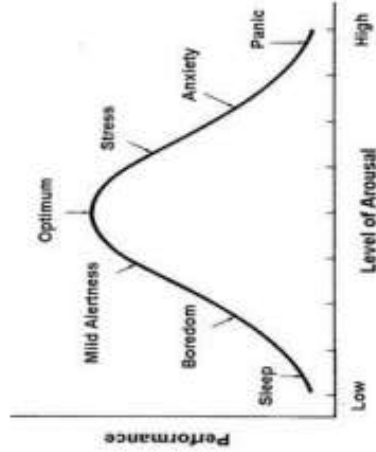
Define: Social Anxiety Disorder

Also called social phobia, is intense anxiety or fear of being judged, negatively evaluated, or rejected in a social or performance situation.

Define: Depression

People experience low mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration.

Some stress is good as it can motivate people however too much can be detrimental, especially if over a long period of time.



Symptoms of Chronic Stress

Chronic stress affects the whole body, it can have several physical or psychological symptoms, which can make functioning on a daily basis more challenging.

The type and severity of symptoms vary considerably from person to person. Signs and symptoms of chronic stress can include:

- Irritability, which can be extreme
- Fatigue
- Headaches
- Difficulty concentrating.
- Rapid, disorganized thoughts
- Difficulty sleeping / insomnia
- Digestive problems and changes in appetite
- Feeling helpless
- A perceived loss of control
- Low self-esteem
- Loss of sexual desire
- Nervousness
- Frequent infections or illnesses
- High blood pressure

Anxiety Disorders

Anxiety is an evolutionary and survival mechanism which is often linked to the flight or fight response. The brain responds to a perceived threat or danger by releasing stress hormones such as adrenaline and cortisol which cause the physical symptoms of anxiety. Once the threatening situation has stopped, the body will usually return to normal.

But if someone has an anxiety disorder these feelings of fear and danger can be ongoing and interrupt their daily routine long after the threat has gone. They can make them feel like things are worse than they actually are.

General Anxiety Disorder is a long-term condition that causes a person to feel anxious about a wide range of situations and issues, rather than a specific event. People with GAD feel anxious most days and often struggle to remember the last time they felt relaxed. As soon as an anxious thought is resolved, another may appear about a different issue.

Social Anxiety Disorder, also called social phobia, is a long-lasting and overwhelming fear of social situations. Social Anxiety is more than shyness. It's an intense fear that does not go away and affects everyday activities, self-confidence, relationships and work or school life.

Symptoms of General Anxiety Disorder

Mental symptoms of anxiety can include:

- Racing thoughts.
- Uncontrollable over thinking.
- Difficulties concentrating.
- Feelings of dread, panic or 'impending doom'.
- Feeling irritable.
- Heightened alertness.
- Problems with sleep.
- Changes in appetite.
- Wanting to escape from the situation you are in, and
- Dissociation.

Physical symptoms of anxiety can include:

- Sweating.
- Heavy and fast breathing.
- Hot flushes or blushing.
- Dry mouth.
- Shaking.
- Hair loss.
- Fast heartbeat.
- Extreme tiredness or lack of energy
- Dizziness and fainting, and
- Stomach aches and sickness.

Treatments for Chronic Stress and Anxiety

- Therapy and Counselling such as Cognitive Behaviour Therapy
- Medications – including SSRIs, benzodiazepines, and Beta-blockers
- Self Care including mindfulness, meditation and journaling.
- Alternative therapies such as acupuncture.

Things to Remember

- Everyone experiences stress and anxiety at points in their lives.
- Only a Doctor or Mental Health Professional can diagnose Chronic Stress or an Anxiety Disorder.
- There are treatments available and coping mechanisms.
- Having a stress or anxiety disorder is not a sign of weakness and is more common than people think.

Where to get more help and support

- Parents and trusted family
- School Staff and Wellbeing Team
- GP or Practice Nurse.
- MIND - <https://www.mind.org.uk> Help line - **0300 123 3393** open 9am to 7pm, Monday to Friday or Text: 86463
- Young Minds - <https://youngminds.org.uk> Text: 85268 or Parents helpline: 0808 802 3544
- Stem4 - <https://stem4.org.uk/>

Define: Mental Wellbeing

Mental wellbeing describes your mental state - how you are feeling and how well you can cope with day-to-day life. Our mental wellbeing is dynamic. It can change from moment to moment, day to day, month to month or year to year.

Define: Emotional Literacy

The ability to understand and express feelings. Emotional Literacy involves having self-awareness and recognition of one's own feelings and knowing how to manage them.

Define: Primary Emotions

There are 5 primary emotions but over 600 words in the English language for different emotions. The primary emotion groups are:

1. Joy
2. Anger
3. Sadness
4. Disgust
5. Fear

Define: Mental illness

Mental illnesses comprise of a broad range of problems, with different symptoms. However, they are generally characterized by some combination of abnormal thoughts, emotions, behaviour and relationships with others.

They can only be diagnosed by a Doctor or Mental Health Professional

Signs of good mental wellbeing

- Feeling relatively confident in yourself and have positive self-esteem
- Feeling and express a range of emotions
- Building and maintaining good relationships with others
- Feel engaged with the world around you
- Live and work productively
- Cope with the stresses of daily life
- Adapt and manage in times of change and uncertainty

Things that can affect our mental wellbeing

Everyone is different and what affects someone's mental wellbeing won't necessarily affect others in the same way. Everyone will have times when they have low mental wellbeing, where they feel stressed, upset or find it difficult to cope.

Common life events that can affect your mental wellbeing include:

- loss or bereavement
- loneliness
- relationship problems
- issues at work
- worry about money

However there are times when there is no discernable reason for the way a person feels which can be extremely frustrating.

There are some factors that may make people more vulnerable to experiencing a period of poor mental wellbeing. These may have happened in the past or might still be happening now:

- Childhood abuse, trauma, violence or neglect
- Social isolation or discrimination
- Homelessness or poor housing
- A long-term physical health condition
- Social disadvantage, poverty or debt
- Unemployment
- Caring for a family member or friend
- Significant trauma as an adult, such as military combat, being involved in a serious accident or violent crime

Signs of poor mental wellbeing

- Erratic changes in mood and behavior
- Distancing from friends and family
- Loss of interest in things that they used to be interested in.
- Excessive sleeping or not sleeping.
- Increased alcohol consumption.
- Poor concentration and being easily distracted
- Finding it hard to make decisions
- Feeling overwhelmed by things & fearfulness
- Finding it difficult to control your emotions
- Irritability and short temper or aggression

The Importance of Positive Relationships

Connecting with others can help us to feel a greater sense of belonging and can help to challenge feelings of loneliness.

- **Make time for the people you love.** Keeping regular contact with friends and family, whether it's face-to-face, on the phone or by text, can strengthen your relationships.
- **Join a group.** Think of the things you like to do, such as drawing, gardening or sport and look for local groups. Meeting others with a shared interest can increase your confidence and build your support network.
- **Talk about the way you feel.** Opening up to a trusted friend or family member can help you to feel listened to and supported. Just acknowledging your feelings by saying them out loud can help.
- **Use peer support.** If you're finding things difficult, talking to people who have similar feelings or experiences can help you to feel accepted.

The Importance of Self Care

At times people may feel guilty for spending time on themselves. But it's essential for mental wellbeing and can help people to be more resilient.

Some self care techniques include

- Mindfulness
- Doing something you enjoy
- Relaxation techniques
- Get outdoors and fresh air
- Exercise

If someone is living with a mental health problem, taking steps to look after their mental health can help you improve your wellbeing. Strategies can include:

- Talking to someone
- Knowing triggers and warning signs
- Keeping a mood diary
- Building your self esteem.

Where to get more help and support

- Parents and trusted family.
- School Staff and Wellbeing Team
- Your Doctor or Practice Nurse
- MIND - <https://www.mind.org.uk>
Help line - **0300 123 3393** open 9am to 7pm, Monday to Friday or text: 86463
- Young Minds - <https://youngminds.org.uk> Text: 85258 or Parents Helpline: 0800 802 5544
- Stem4 - <https://stem4.org.uk/>

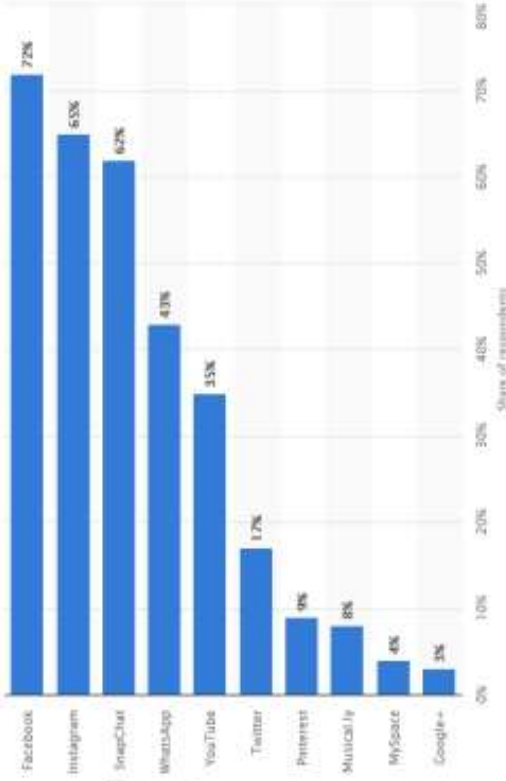
Define: Social Media

Websites and applications that enable users to create and share content or to participate in social networking.

Top tips for staying safe on Social media

1. Use a strong password. The longer it is, the more secure it will be.
2. Use a different password for each of your social media accounts.
3. If you have social media apps on your phone, be sure to password protect your device.
4. Be selective with friend requests. If you don't know the person, don't accept their request. It could be a fake account.
5. Click links with caution. Social media accounts are regularly hacked.
6. Be careful about what you share. Don't reveal sensitive personal information (e: home address, financial information, phone number).
7. Become familiar with the privacy policies of the social media channels you use and customize your privacy settings to control who sees what.
8. Remember to log off when you're done.
9. Report any inappropriate behavior to the site.

Social media sites or apps used by children (12- 15) in the UK in 2018



Age Restrictions On Social Media



These are in the websites terms and conditions and are not legal restrictions.

Define: WhatsApp

WhatsApp is a messenger app for smartphones. WhatsApp uses the internet to send messages, images, audio or video. The service is very similar to text messaging services, however, because WhatsApp uses the internet to send messages, the cost of using WhatsApp is significantly less than texting.

Define: YouTube

YouTube is a video sharing service where users can watch, like, share, comment and upload their own videos. Users can search for and watch videos. Create a personal YouTube channel. Upload videos to your channel. Like/Comment/share other YouTube videos. Users can subscribe/follow other YouTube channels and users. Create playlists to organize videos and group videos together.

Define: Twitter

Twitter is known as a micro-blogging site. Blogging has been around for some time. Usually blogging consists of people setting up basic websites where they write about whatever they want, whether it be politics, sport, cooking, fashion etc. Posting a message is known as a tweet. People make connections by following other people's twitter feeds. Once you click follow, anything that person or organisation says will appear on your timeline.

Define: TBH

short for To Be Honest — is a polling app that lets your friends answer questions anonymously. Essentially it is a big popularity contest, where people received "gems" when they are picked in a poll.

Define: Facebook

Facebook is a website which allows users, who sign-up for free profiles, to connect with friends, work colleagues or people they don't know, online. It allows users to share pictures, music, videos, and articles, as well as their own thoughts and opinions with however many people they like.

Define: Snapchat

Snapchat is a mobile messaging application used to share photos, videos, text, and drawings. It's free to download the app and free to send messages using it. There is one feature that makes Snapchat different from other forms of texting and photo sharing: the messages disappear from the recipient's phone after a few seconds.

Define: Instagram

At its most basic, Instagram is a social networking app which allows its users to share pictures and videos with their friends. Once a user snaps a picture, Instagram filters — of which there are dozens — can transform images in a manner reminiscent of old-fashioned Polaroid prints.

Define: TikTok (formally Musical.ly)

TikTok is an app for creating, sharing and discovering short music videos (15 sec), think Karaoke for the digital age. It used by young people as an outlet to express themselves through singing, dancing, comedy, and lip-synching.

Define: Calories

Calories refer to the energy people get from the food and drink they consume.

Define: Obesity

Obesity has been defined by the National Institutes of Health (the NIH) as a BMI of 30 and above.

Define: BMI

This is a numerical value of your weight in relation to your height. A BMI between 18.5 and 25 kg/m² indicates a normal weight.

BMI is a person's weight in kilograms (kg) divided by his or her height in meters squared.

Define: Nutrition

The process of providing or obtaining the food necessary for health and growth.

Define: Veganism

A diet where a person does not eat or use animal products.

Define: Vegetarianism

A diet where a person does not eat meat or fish

The Eat Well Plate



What does 1 portion of your 5 a day look like?

- 80g of fresh, canned or frozen fruit and vegetables
- 30g of dried fruit – which should be kept to mealtimes
- 150ml glass of fruit juice or smoothie – but do not have more than 1 portion a day as these drinks are sugary and can damage teeth
- Just 1 apple, banana, pear or similar-sized fruit is 1 portion each.
- A slice of pineapple or melon is also 1 portion.
- 3 heaped tablespoons of vegetables is another portion.

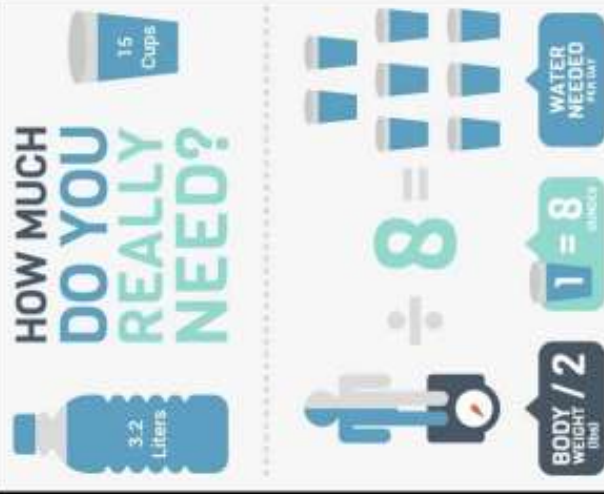
Impacts of poor Nutrition

- Short term:
- stress,
 - tiredness
 - limit capacity to work.
- Long term it can contribute to the risk of developing some illnesses and other health problems such as:
- being overweight or obese
 - tooth decay
 - high blood pressure
 - high cholesterol
 - heart disease and stroke
 - type-2 diabetes
 - osteoporosis
 - some cancers
 - depression
 - eating disorders.

How much exercise should you do?

- Jogging or running
- Racewalking
- Hiking uphill
- Cycling more than 10 miles per hour or steeply uphill
- Swimming fast or lap swimming
- Aerobic dancing, fast dancing, step aerobics
- Heavy gardening with digging, hoeing, shoveling heavy snow, moving or pushing heavy objects, carrying loads of 50 pounds on level ground or 25 pounds or more upstairs.
- Martial arts
- Playing sports with lots of running such as basketball, hockey, soccer
- Singles tennis
- Court sports such as handball, racquetball, squash

HOW MUCH DO YOU REALLY NEED?



Where to get more help and support

- Parents and trusted family
- School Staff and Wellbeing Team
- NHS Eat Well: <https://www.nhs.uk/live-well/eat-well/>
- British Nutrition Foundation: <https://www.nutrition.org.uk/healthyliving/lifestages/teenagers.html>
- Kids Health: <https://kidshealth.org/en/teen/creating.html>

Personal Development

SLEEP

THE HECTIC TEACHER RESOURCE

Define: Sleep Disorders

These are medical conditions which affect our sleep. They can only be diagnosed by a Doctor and can require medicinal intervention.

Define: REM Sleep

A kind of sleep that occurs at intervals during the night and is characterised by rapid eye movements, more dreaming and bodily movement, and faster pulse and breathing.

Define: Sleep Apnoea

Sleep apnoea occurs when the upper airway becomes completely or partially blocked, interrupting regular breathing for short periods of time -- which then wakes you up.

Define: Insomnia

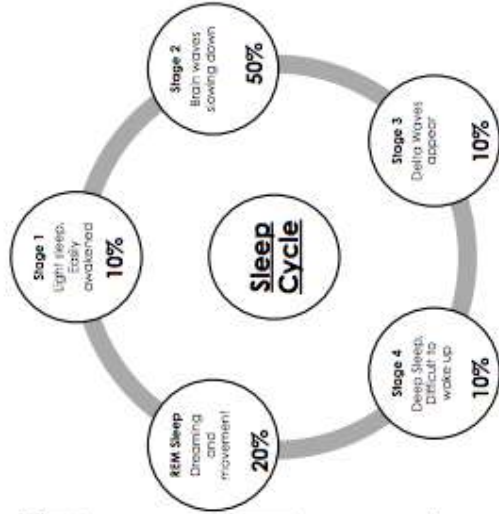
Trouble falling asleep or may wake up frequently during the night or early in the morning. Acute insomnia is when this occurs infrequently. Chronic is when it occurs regularly.

Define: Sleep Deprivation

Sleep deprivation means you're not getting enough sleep. This can be caused intentionally or not. It can be either chronic or acute and may vary widely in severity.

How Much Sleep Is "Enough"?

Sleep is one of the cornerstones of health. Sleeping too much or too little can have adverse effects on your health. Sleeping less than 5 hours per night can double your risk of heart disease, heart attack, and stroke. There is also a persistent relationship between lack of sleep and weight gain, insulin resistance, and diabetes.



What can cause problems with our sleep?



Medical Issues – The are 89 recognised sleep disorders and the most common are insomnia, Sleep apnoea, Restless limb syndrome.



Technology – The blue light emitted by screens restrain the production of melatonin, the hormone that controls your sleep/wake cycle or circadian rhythm. Reducing melatonin makes it harder to fall and stay asleep.



Hunger – It is not recommended to eat a big meal before bedtime, a small bedtime snack helpful. If you go to bed hungry, you're likely to wake up with hunger pang.



Stress causes hyperarousal, which can upset the balance between sleep and wakefulness.



Mental Health Issues – Mental health issues can have a variety of impacts on sleep, such as anxiety making it hard to settle due to racing thoughts, PTSD can lead to nightmares and night terrors, depression can lead to over-sleeping.



Your Bed – Past research shows that sleeping on an uncomfortable mattress can rob you of up to an hour's vital, restful sleep.



Clutter and Messy Rooms – A cluttered bedroom makes for a cluttered mind. Don't use it as a dumping ground for the rest of the house. Your bedroom should be a sanctuary, somewhere you can go to turn off and relax.



Napping and Lie Ins – Trying to make up for lack of sleep with extra time in bed the following morning, or even a few days later, throws off your internal body clock. Naps of under 30 minutes can be refreshing any longer throws out your body clock.

Consequences of Sleep Deprivation

- Emotional Affects
 - Irritability
 - Mood Swings
 - Fatigue / tiredness
 - Lack of Motivation
 - Depression
- Physical Affects
 - High Blood Pressure
 - Reduced Sex Drive
 - Lower immune system
 - Disrupt hormone regulation
 - Higher risk of type 2 diabetes
- Cognitive effects
 - Forgetfulness
 - Clumsiness
 - Difficulty focusing

Top Tips for a Good nights sleep

- Routines – set a routine which your body can recognize & a wind down for sleep.
- Teach free bedrooms – stop using technology such as tablets and phones 2 hours before bed or use a blue light filter.
- Clutter free bedrooms – Keeping your bedroom clutter free and tidy and help make the room feel calmer and more relaxing.
- Reduce stimulant food intake – foods and drinks which contain a lot of sugar and caffeine can impact your sleep so try not to consume too much after 3pm.
- Temperature – the suggested bedroom temperature should be around 18 degrees Celsius.

More information & Support

Sleep deprivation means you're not getting enough sleep. This can be caused intentionally or not. It can be either chronic or acute and may vary widely in severity.

Physical Education

WADHAM KS3 PE KNOWLEDGE ORGANISER: NETBALL

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, lifting ball 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 Defence
WD - Wing Defence
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

Physical Education

<p>Actions</p> <ol style="list-style-type: none"> 1. Jump 2. Turn 3. Gesture 4. Travel 5. Balance 	<p>Space</p> <ol style="list-style-type: none"> 1. Directions 2. Levels 3. Spatial Pathways
<p>Dynamics</p> <ol style="list-style-type: none"> 1. Fast/slow 2. Sudden/sustained 3. Strong/light 4. Direct/indirect 5. Flowing/abrupt 6. Sharp/smooth 	<p>Relationships</p> <ol style="list-style-type: none"> 1. Formations 2. Mirroring 3. Action and reaction 4. Contact

Key Words:

- Formations
- Space
- Dynamics
- Relationships

Key Words:

- Timing
- Rhythm
- Count of 8
- Actions
- Motif
- Unison
- Canon
- Levels

<p>WADHAM KS3 PE KNOWLEDGE ORGANISER: Dance</p>	<p>Choreographic devices</p> <p>Actions – Jump/Leap, turn, levels, balance/stillness, travelling & gesture.</p> <p>Motif – a movement phrase expressing an idea that is repeated and developed throughout the dance</p> <p>Unison – two or more dancers performing the same movement at the same time</p> <p>Canon – when a dancer performs an action, another dancer then does the same later.</p> <p>Levels – floor work, stood up, on knees</p> <p>Formations – where dancers stand in relations to each other when performing</p>
<p>Skills</p> <p>Timing – using time or counts when matching movements to sound and/or other dancers</p> <p>Rhythm – sequence in time repeated</p> <p>Count of 8 – method of breaking down and counting dance moves.</p>	

Science

7Ba – The scientific method

Word	Pronunciation	Meaning
data		The results from an experiment.
evidence		Data that is used to support an idea or to show that an idea is wrong.
extinct		No longer exists.
hypothesis	<i>hy-poth-es-sis</i>	An idea about how something works that can be tested using experiments.
observation	<i>ob-zer-vay-shun</i>	Something that you see happening.
prediction	<i>pred-ik-shun</i>	What you think will happen in a certain experiment.
reproduce		When organisms reproduce, they make more organisms like themselves.
scientific method		Sequence of steps in investigations that scientists use to suggest and test ideas, in order to explain their observations.

7Ba – Animal sexual reproduction

Word	Pronunciation	Meaning
egg cell		The female sex cell (gamete).
endangered	<i>en-dayn-jerd</i>	When a type of organism is in danger of ceasing to exist.
external fertilisation	<i>fert-ill-l-zay-shun</i>	When fertilisation happens outside the bodies of the parents.
fertilisation	<i>fert-ill-l-zay-shun</i>	Fusing of a male gamete with a female gamete.
fertilised egg cell	<i>fert-ill-l-zed</i>	What is produced when a sperm cell fuses with an egg cell.
fuse	<i>fewz</i>	When two things join together to become one.
gamete		A cell used for sexual reproduction.
internal fertilisation	<i>fert-ill-l-zay-shun</i>	When fertilisation happens inside the body of a parent.
offspring		The new organisms produced by reproduction.
parent		An organism that has produced offspring.
sex cell		Another word for a gamete.
sexual reproduction	<i>ree-prod-uck-shun</i>	Reproduction that needs two individuals to produce a new organism of the same type.
sperm cell		The male sex cell (gamete).

Science

7Bb – Reproductive organs

Word	Pronunciation	Meaning
adapted		When something has special features that allow it to carry out its function.
bladder		Organ that stores urine.
cervix	<i>sir-vicks</i>	Ring of muscle at the bottom of the uterus in females.
cilia	<i>sil-lee-ah</i>	Small hairs on the surface of some cells.
circumcision	<i>sir-cum-siz-shun</i>	Removal of the foreskin.
Fallopian tube		Another term for 'oviduct'.
foreskin		A covering of skin protecting the head of the penis.
function		Something's job.
glands		Special tissues that make and release substances. The glands in the male reproductive system add a special liquid to the sperm cells to make semen.
menopause	<i>men-O-paws</i>	When the ovaries in women stop releasing egg cells.
ovary	<i>O-very</i>	Female reproductive organ. Produces egg cells.
oviduct		Carries egg cells from the ovaries to the uterus in females. Fertilisation happens here.
puberty		Time during which big physical changes happen in the body.
reproductive organs		Organs used in sexual reproduction.
reproductive system		All the reproductive organs.
scrotum	<i>scrow-tum</i>	Bag of skin containing the testes in males.
semen	<i>see-men</i>	Mixture of sperm and special fluids released by males during ejaculation.
sperm duct		Tube that carries sperm cells from the testes to the urethra.
testis		Male reproductive organ. Produces sperm cells. Plural = testes.
urethra	<i>you-ree-thra</i>	Tube that carries sperm cells from the testes and urine from the bladder.
uterus	<i>you-ter-ous</i>	Organ in females in which a baby develops.
vagina	<i>vaj-eye-na</i>	Tube in females leading from the cervix to the outside. The penis is placed here during sexual intercourse.

Science

7Bc – Becoming pregnant

Word	Pronunciation	Meaning
amnion		Bag containing amniotic fluid.
amniotic fluid		Liquid surrounding the growing embryo and protecting it.
ejaculation	<i>edge-ack-you-lay-shun</i>	When semen is pumped out of a man's penis.
embryo	<i>em-bree-O</i>	Tiny new human life that grows by cell division from a fertilised egg cell.
erection		When the penis becomes stiff.
implantation	<i>im-plant-ay-shun</i>	When an embryo sinks into the lining of the uterus.
placenta	<i>plas-en-ta</i>	Attached to the uterus wall, this takes oxygen and food out of the mother's blood and puts waste materials into the mother's blood.
pregnant		When a female animal has an embryo growing inside her uterus.
sexual intercourse		Or 'making love', 'having sex', during which semen is ejaculated into the end of the vagina.
umbilical cord	<i>um-bill-ick-al</i>	Carries food, oxygen and waste between the placenta and the growing embryo or fetus.

7Bd – Making notes

Word	Pronunciation	Meaning
IVF		A procedure in which egg cells are taken from a woman and fertilised in a dish outside the woman's body. The embryo develops and is then placed inside her.
sperm count		The number of sperm cells in a certain volume of semen.
surrogate mother		A human or animal in whose uterus an embryo grows but which is not an embryo made using one of her egg cells.
test-tube baby		Baby born using IVF.

Science

7Bd – Gestation and birth

Word	Pronunciation	Meaning
afterbirth		When the placenta is pushed out through the vagina after the baby has been born.
antibodies		Substances produced by white blood cells that help to fight micro-organisms that might cause diseases.
contractions	<i>con-track-shuns</i>	The uterus muscles squeezing.
fetus	<i>fee-tus</i>	An embryo is known as a fetus once it has developed a full set of organs.
gestation period	<i>jess-tay-shun</i>	The length of time from fertilisation to birth.
labour		Labour starts when contractions start in the uterus and ends when the afterbirth has come out.
mammary glands		Glands contained in the breasts of women that produce milk after childbirth.
navel	<i>nave-ell</i>	Scar left by the cord. Often called the 'belly button'.
ultrasound scan		An ultrasound scanner uses sound to create a picture of what is inside someone's body.

7Be – Growing up

Word	Pronunciation	Meaning
puberty	<i>pew-ber-ty</i>	Time when big physical changes happen in the body.
sex hormones	<i>hor-moans</i>	Natural chemicals released in our bodies that control the menstrual cycle and puberty.
acne	<i>ack-nee</i>	Spots on the skin.
adolescence	<i>add-ol-less-sense</i>	Time when physical and emotional changes occur in teenagers.
menstrual cycle	<i>men-strew-al</i>	Series of events lasting about a month, happening in the female reproductive system. The cycle causes ovulation and the lining of the uterus is replaced.
menstruation	<i>men-strew-ay-shun</i>	When the lining of the uterus and a little blood pass out of the vagina as part of the menstrual cycle.
ovulation	<i>ov-you-lay-shun</i>	Releasing of an egg cell from an ovary.
lifecycle		The series of changes in an organism during its life.

Science

7Ca – In training

Word	Pronunciation	Meaning
criteria	<i>cry-teer-ee-a</i>	A set of standards by which to judge things. For example, to compete in the men's Olympics 100 metres sprint you need to be able to run it in 10.18 seconds or faster. A time of 10.18 seconds is the criterion for entry into the event.
organ		A part of a plant or animal that does a very important job. Organs are made of different tissues working together.
organ system		Collection of organs working together to do a very important job.

7Ca – Muscles and breathing

Word	Pronunciation	Meaning
adaptation	<i>ad-ap-tay-shun</i>	The features something has to allow it to do its job or to survive.
breathing		The movement of muscles that make the lungs expand and contract.
breathing rate		The number of times you inhale and exhale in one minute.
breathing system		The organ system that allows the exchange of gases in the lungs. Also known as the gas exchange system.
carbon dioxide		A waste gas produced by respiration.
cell		The basic unit of all life. All organisms are made of cells.
contract		To get smaller. When a muscle contracts it uses energy to get shorter and fatter.
diaphragm	<i>dye-a-gram</i>	Organ containing a lot of muscle tissue, which contracts and moves downwards to increase the volume of the lungs when inhaling.
excretion	<i>ex-cree-shun</i>	Getting rid of waste. All organisms excrete.
exhalation	<i>ex-ha-lay-shun</i>	Breathing out.
function	<i>funk-shun</i>	Something's job is its function.
gas exchange		When one gas is swapped for another. In the lungs, oxygen leaves the air and goes into the blood. At the same time, carbon dioxide leaves the blood and goes into the air in the lungs.
gas exchange system		The organ system that allows the exchange of gases in the lungs. Also known as the breathing system.
inhalation		Breathing in.
oxygen		A gas that makes up about 21% of the air.
relax		When a muscle relaxes it stops exerting a force and becomes thinner and longer.
respiration	<i>res-per-ay-shun</i>	A process in which energy is released from substances so it can be used by an organism. All organisms respire. There are, however, different forms of respiration.
surface area		The amount of area that the surface of something has.
ventilation	<i>vent-ill-ay-shun</i>	The movement of air in and out of your lungs.

Science

7Cb – Muscles and blood

Word	Pronunciation	Meaning
artery		A blood vessel that carries blood away from the heart.
blood vessel		A tube that carries blood in the body.
bone marrow		Tissue inside bones in which blood cells are made.
capillary		A thin-walled blood vessel that carries blood from arteries to veins.
haemoglobin	<i>hee-mow-glow-bin</i>	The substance that carries oxygen in red blood cells.
heart chambers		Spaces inside the heart that the blood moves through as the heart pumps.
plasma		The liquid part of the blood.
pulse		A feeling of the heart beating that can be felt in arteries.
pulse rate		The number of times a pulse is felt in a minute.
red blood cells		Blood cells that carry oxygen.
vein		A blood vessel that carries blood towards the heart.
white blood cells		Blood cells that fight micro-organisms.

7Cb – Scientific questions

Word	Pronunciation	Meaning
ethical questions		Questions about what people think is fair or right or wrong.
hypothesis	<i>hy-poth-es-sis</i>	An idea about how something works that can be tested using experiments. (Plural is hypotheses.)
scientific method		Sequence of steps that scientists use in investigations to suggest and test ideas in order to explain their observations.

7Cc – The skeleton

Word	Pronunciation	Meaning
backbone		Series of small bones (vertebrae) that form a chain to support the main part of some animals' bodies.
cartilage		A slippery substance that is found on the ends of some bones and used to help form some body parts (e.g. ear, nose).
fixed joint		A place where two or more bones meet but cannot move.
flexible joint		A place where two or more bones meet and can be moved (by muscles).
fracture		Break.
ligament		A band of tissue that connects bones together.
skeleton		The structure that supports an organism and gives it its shape. It is made of 206 bones in an adult human.
skull		Collection of bones that protect the brain.
tendon		A cord of tissue that connects a muscle to a bone.
vertebrae		Small bones that form the 'backbone'.

Science

7Cc – Sentences

Word	Pronunciation	Meaning
clause		Part of a sentence that contains a subject and a verb.
co-ordinating conjunction		A conjunction that is used to join two main clauses together.
complex sentence		A sentence that contains a main clause and one or more subordinate clauses.
compound sentence		A sentence that contains two main clauses.
conjunction		A word used to link clauses.
journal (scientific)		A magazine in which scientific papers are published.
main clause		A clause that makes sense on its own.
paper (scientific)		A report about investigations done by scientists.
simple sentence		A sentence containing one main clause.
subject		The person, place, thing or idea that is doing or being something in a clause.
subordinate clause		A clause that does not make sense on its own.
subordinating conjunction		A conjunction that is used to join a subordinate clause to a main clause.
verb		The action word in a clause.

7Cd – Muscles and moving

Word	Pronunciation	Meaning
antagonistic pair	<i>an-tag-on-is-tic</i>	Two muscles that work a joint by pulling a bone in opposite directions.
biceps	<i>bye-seps</i>	Muscle in the upper arm that helps to raise and lower the lower arm.
biomechanics		The study of how muscles and bones work together to move your body.
impulse		An electrical signal that travels in the nervous system.
locomotor system		Organ system that contains all your muscles and bones and allows you to move.
mitochondria	<i>my-tow-kon-dree-a</i>	Small structures in the cytoplasm of all cells where respiration occurs.
nerve		An organ that is made of nerve cells (neurons) and carries impulses.
newton		The unit for force (N).
relax		When a muscle relaxes it stops exerting a force and becomes thinner and longer.
spinal cord	<i>spy-nal kord</i>	Large bundle of nerves that runs through the vertebrae (backbone).
triceps	<i>try-seps</i>	Muscle in the upper arm that helps to raise and lower the lower arm.

Science

7Fa – Hazardous or safe?

Word	Pronunciation	Meaning
acid	<i>ass-id</i>	A substance that turns litmus red. It has a pH of less than 7.
alkali	<i>alk-al-lie</i>	A substance that turns litmus blue. It has a pH of more than 7.
caution	<i>cor-tion</i>	A warning to 'take care'. Some substances need to be used with caution (e.g. they may cause skin irritation).
corrosive	<i>cor-row-sive</i>	A corrosive substance can destroy metals, stonework and skin.
diluted	<i>die-loot-ed</i>	A substance that has had water added to it to make it less concentrated.
explosive	<i>ex-plosive</i>	An explosive substance reacts very fast, giving out a lot of energy and making a lot of noise and gas. Heating may cause an explosion.
flammable	<i>flamm-able</i>	A flammable substance catches fire easily.
hazard	<i>haz-ard</i>	Something that could cause harm.
irritant	<i>irr-it-ant</i>	An irritant substance causes skin and eyes to be sore or sting.
toxic	<i>tox-ic</i>	A toxic substance is poisonous.

7Fa – Controlling risk

Word	Pronunciation	Meaning
concentrated	<i>con-cen-tray-ted</i>	A solution that contains a large amount of solid (solute) dissolved in a small amount of liquid (solvent).
precaution	<i>pre-cor-tion</i>	An action taken to reduce the risk of a hazard causing harm (e.g. wearing eye protection when handling an acid to prevent it splashing in your eyes).
risk		This is the chance that a hazard will actually cause harm.

7Fb – Indicators, acids and alkalis

Word	Pronunciation	Meaning
indicator	<i>ind-ic-ay-ter</i>	A dye that changes to different colours in acids and alkalis.
neutral	<i>new-tral</i>	A substance that is neither an acid nor an alkali. It has a pH of 7.

7Fc – The pH scale

Word	Pronunciation	Meaning
pH scale		A numerical scale from 1 to 14 showing how acidic or alkaline a substance is. Acids have a pH below 7, neutral substances have a pH of 7 and alkalis have a pH greater than 7.