

Hartismere School



Knowledge Booklet 2026 - 2027

Year 7



Name: _____

Form: _____

What this booklet is for

Your teachers have selected some of the most important and useful knowledge you need to succeed in your subjects. They are in this booklet! Of course you will cover lots of other things in your lessons, but the knowledge in this booklet will help you to learn more effectively throughout your time at Hartismere.

When you will use this booklet

You will use this booklet in a lesson where you may have a cover teacher, for some homework, at the start of lessons and to revise for tests and quizzes.

You can also use this booklet to go above and beyond your school work. Your teachers have made suggestions for places you can look and things to do to really test your brain! These are in the booklet under the 'Sharp Minds' sections.

How you will use this booklet

Each subject has a section with the important things you need to know. You are going to learn how to quiz yourself so that the things you need to know stay in your memory. Using 'look, cover, write, check' is an excellent way to remember information.

How will you do this?

1. Choose a subject (unless your teacher has chosen it for you).
2. Choose no more than 5 words or terms. (If there are diagrams, treat each one as one thing)
3. **Read** the words and say them over and over again in your head (without saying them aloud) for 2 - 3 minutes.
4. Now turn to your practice pages (at the back of this booklet) or use your rough book. Now **write down** as many words and definitions as you can remember in box 1 (or draw the diagram if that's what you've chosen).
5. Uncover the words or terms and **check** you have spelled them correctly and your definitions are right. Make any changes in a different colour.
6. Spend 2-3 minutes reading the words again and saying them in your head.
7. Now **cover up** box 1 and write out the words again in box 2. (This step is very important).
8. Now look at your work in box 2. Check you have got them right. Check your spelling. Make any changes in a different colour.
9. **Repeat** this process until you have got them all right. If you run out of space, use your rough book or paper. You will need to show your tutor the practice you have been doing.

Subject list

Page number	Subject
3	Art
4-5	Biology
6-8	Chemistry
9-11	Computer Science
12-13	Design & Technology
14-15	Drama
16-17	English
18-20	French
21-22	Geography
23-27	History
28-30	Maths
31-32	Music
33-34	PE
35-36	Physics
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39-40	Science
41-44	Spanish
45-49	Self-quizzing pages
50	Hart points record for 'Sharp Minds'

Sharp Minds

For almost every subject, you'll see a 'Sharp Minds' section like the one below. Your teachers have given you suggestions of things you can do to go above and beyond in your subjects. Which ones you do is up to you, but you should record them on page 46 and show your tutor. You'll get Hart points and a reward if you complete ten or more.



Sharp minds: where to look

- Your teachers have made suggestions of all sorts of interesting things to do and places to explore.
- If there are links to websites, you can find this booklet on our school website under 'Sharp Minds'

Art

	Term or word	Definition
1	colour	A visual element defined by its three key properties: hue, value and saturation.
2	shape	The external form, contours, or outline of someone or something.
3	line	A mark with variable length, width, and direction, made on a surface by moving a point.
4	tonal range	The spectrum of light to dark values within an image, or artwork.
5	pattern	A repeated decorative design.
6	ellipse	A closed, curved shape that resembles a flattened circle.
7	texture	The feel, appearance, or consistency of a surface.
8	markmaking	The act of creating lines, patterns, textures, and shapes on a surface.
9	contour	The shape or form of something.
10	direction of light	The path or origin of light in relation to a subject or surface.
11	cast shadow	The dark shape projected onto a surface by an object blocking a light source.
12	hue	Hue means a colour or shade.
13	technique	The skill and method an artist uses to manipulate their chosen materials.
14	shading	The use of tones, lines, or other markings to create the illusion of light and shadow.
15	cross hatching	An art technique where two or more sets of parallel lines are layered on top of each other at different angles to create shading and texture in a drawing.



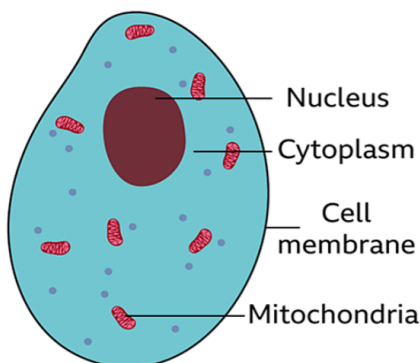
Sharp minds in art: where to look

- One of the best ways to improve your understanding of art is to go to an art gallery but if you can't go, have a look at their websites:
 - <https://www.tate.org.uk/>
 - <https://www.npg.org.uk/>
 - <https://sainsburycentre.ac.uk/>
- You can join the art club at lunch time in school. (see Mrs HN for details)
- You could sign up for an art competition or exhibition, look online for a local event.

Biology

What makes up an animal cell?

Each component in the animal cell has a particular function. Animal cells often have an irregular shape.



The four key components of most animal cells are:

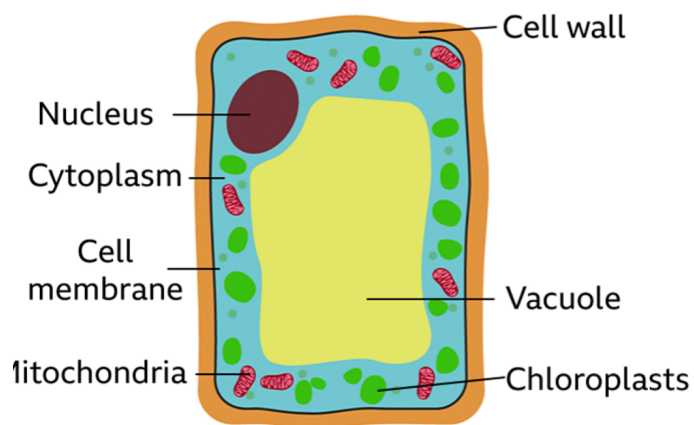
- **Nucleus** - this contains the genetic material (DNA) of the organism and controls the cell's activities.
- **Cytoplasm** - the liquid that makes up most of the cell in which chemical reactions happen. This is mainly water.
- **Cell membrane** - a flexible outer layer that surrounds the cell and controls which substances can pass into and out from it.
- **Mitochondria** - tiny parts of cells floating in the cytoplasm where energy is released from glucose from food. The mitochondria, found in the cell cytoplasm, are where most respiration  happens.

What makes up a plant cell?

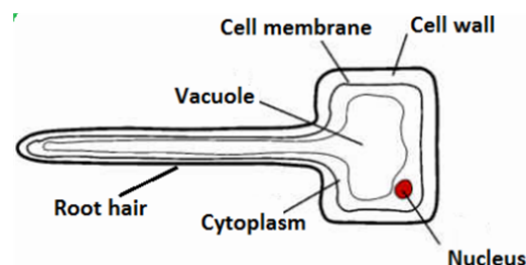
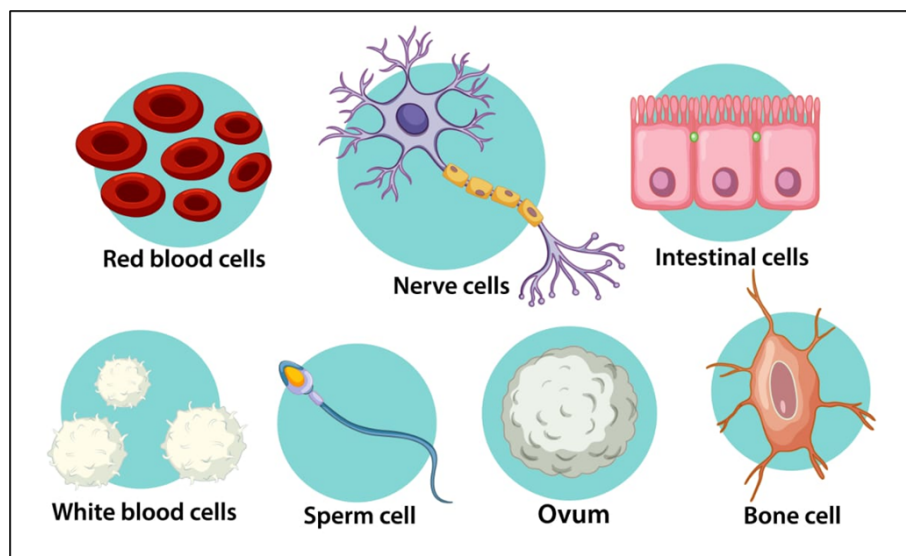
Plant cells often have a regular shape. They have the same cell components as animal cells: a **nucleus**, **cell membrane**, **cytoplasm** and **mitochondria**.

They also have these extra three as well:

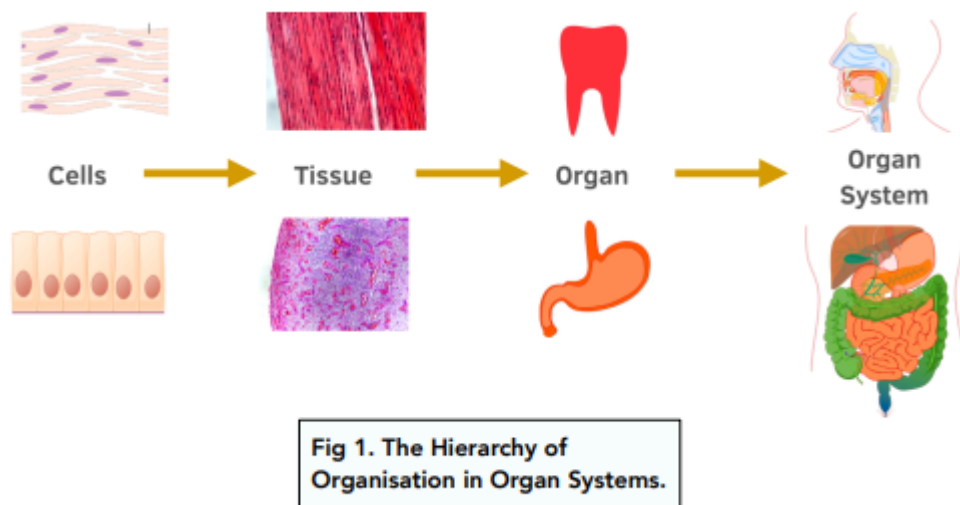
- **Cell wall**: a tough outer layer of the cell, which contains cellulose to provide strength and support to the plant.
- **Vacuole**: a space inside the cytoplasm that contains a watery liquid called cell sap. It keeps the cell firm.
- **Chloroplasts**: structures found in the cells of green parts of plants only (leaves and stems) which contain a green pigment called chlorophyll in which photosynthesis  occurs.



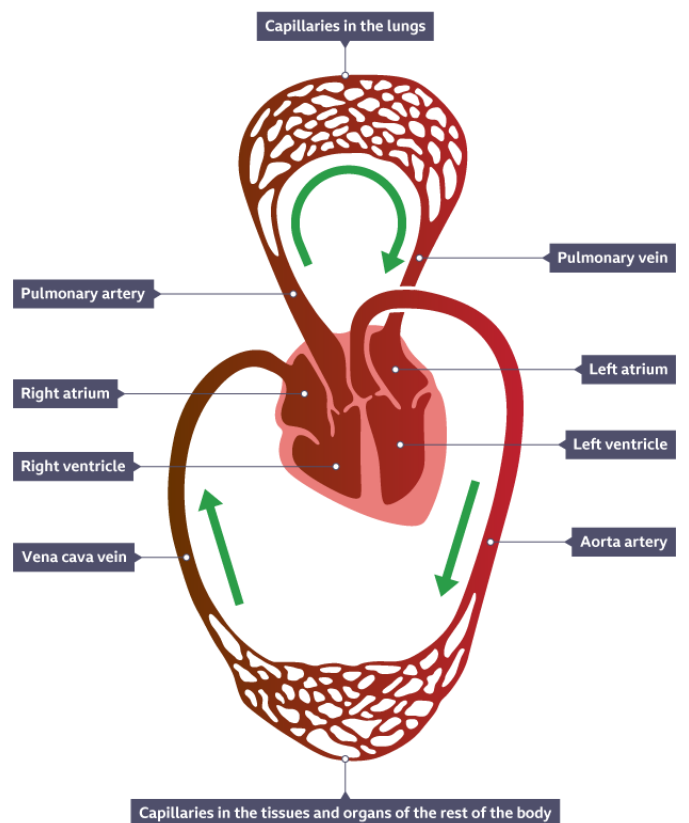
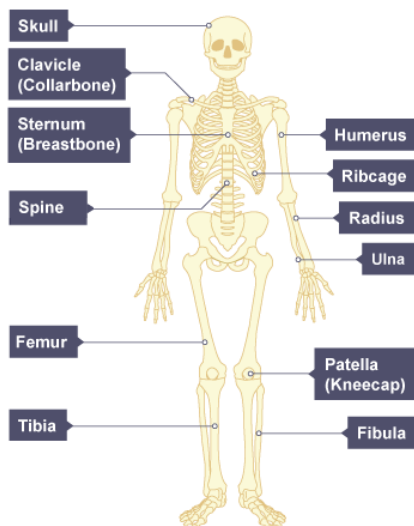
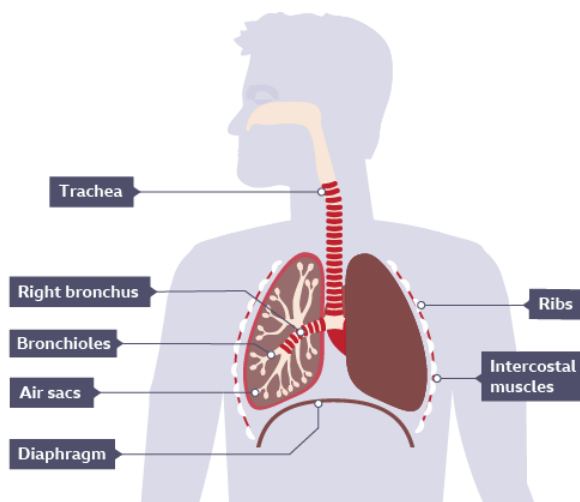
Organisms have specialised cells.



You need to be able to remember how organisms are organised into cells, tissues, organs and organ systems.



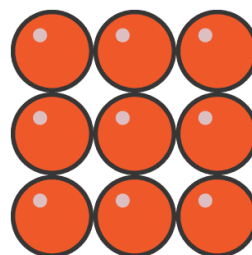
You also need to know the structures of the respiratory, circulatory and skeletal systems



Chemistry

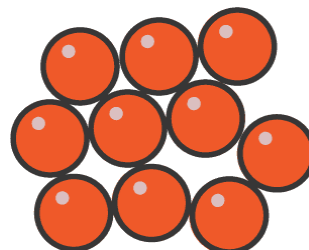
Solids

1	solids	Lots of materials are solid, such as paper, bricks, wood, metal, and ice.
2	particles	The particles in solids are very close together, therefore they cannot usually be compressed or squashed. Forces of attraction between the particles hold them together and keep them in place.
3	arrangement of particles	The particles in solids are arranged in a regular way. The particles in solids move only by vibrating about a fixed position. This gives solids a fixed shape and means that they cannot flow like liquids.
4	energy and particles	The hotter a solid gets, the faster its particles vibrate. This means that solids expand when they are heated.



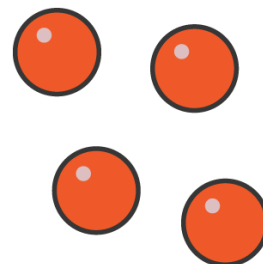
Liquids

1	liquids	There are many different liquids such as; water, oil, fruit juice, and many others.
2	particles	The particles in liquids are arranged in a random way, and are close together, touching many of their neighbours. There are some gaps, but liquids cannot usually be compressed or squashed.
3	energy and particles	The particles of a liquid have enough energy to break free of some of the forces of attraction between the particles. So particles in liquids can move around and can move over each other, allowing liquids to flow and be poured.

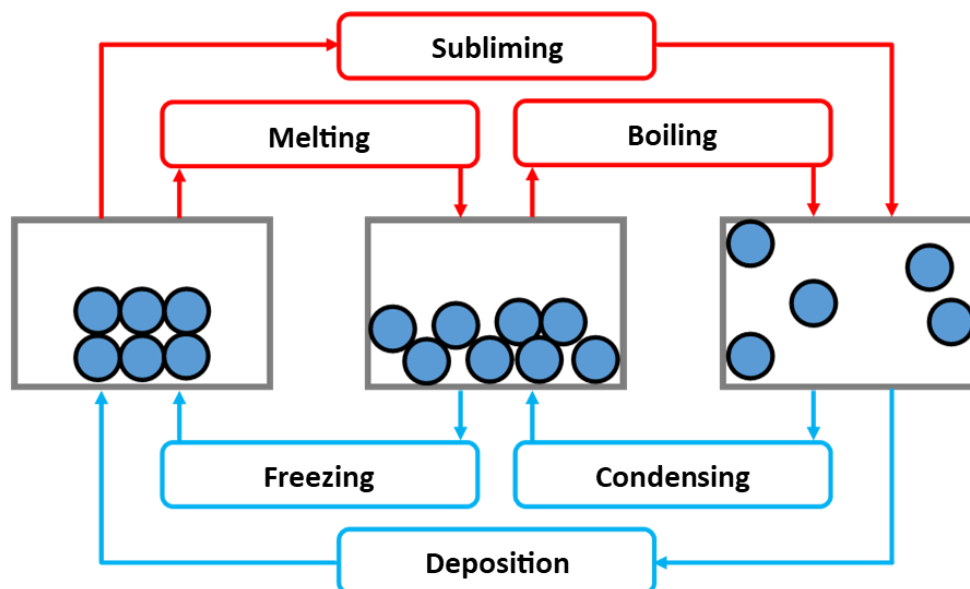


Gases

1	gases	There are lots of different gases, such as the air we breathe or the helium used to fill balloons.
2	particles	The particles in gases are widely spaced and randomly arranged, meaning they can be easily compressed or squashed.
3	energy and particles	The particles in a gas have enough energy to overcome the forces of attraction between the particles, so are free to move in any direction. They move quickly in straight lines, colliding with each other and the walls of their container.



Changes of state (practise reproducing this diagram)



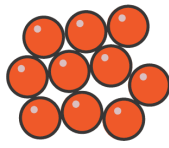
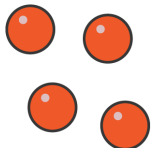
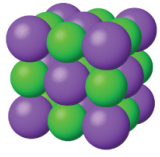
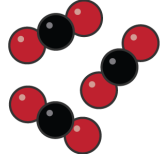
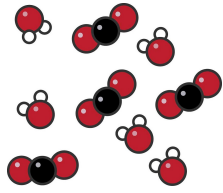
Dissolving

	Term or word	Definition
1	solute	A substance that can dissolve in a solvent.
2	solvent	A liquid that can dissolve a solute.
3	solution	A mixture of a solute and a solvent.

Elements, Compounds and Mixtures

1	atom	The smallest part of an element that can still be recognised as that element.
2	element	A substance made of only one type of atom.
3	compound	A substance made of two or more different types of atoms chemically bonded together.
4	molecule	A substance made of more than one atom chemically bonded together (can be atoms of the same type!)
5	mixture	A substance made of more than one element or compound not chemically bonded together.

Practise reproducing this table

	Solid	Liquid	Gas
Element			
Compound			
Mixture	This is a mixture of two gases		

For 'Sharp Minds', see the 'science' section.

Computer Science

E-Safety		
1	avatar	An image used instead of a real photo to represent you online.
2	blocking	Stopping someone from contacting you on a platform.
3	chat rooms or forums	A place online where people can share views about a topic. Users can be anonymous and the platforms can be poorly moderated, resulting in harmful posts.
4	cloud	Storing of files, such as images and videos, online.
5	cyberbullying	When technology is used to target someone in order to upset, threaten or embarrass them.
6	digital footprint	The trail a person leaves online with the comments and media they share online.
7	E-safety	Staying safe online by protecting yourself and your personal information.
8	email	A web service that allows you to send text and files. Can be used to trick people.
9	inappropriate content	Videos, pictures, or messages that are not suitable for an age group or person.
10	malware	Bad software (like viruses) that can harm your device or steal information.
11	online grooming	When someone builds a friendship with a young person online to take advantage of them later: it's a serious danger.
12	passwords	A secret word or phrase used to protect your accounts. It should be strong and kept private.
13	personal information	Details that identify you, such as your name, address or school.
14	phishing	A fake message or website that tricks you into giving away personal information or passwords.
15	sensitive information	Personal information (such as passwords, financial information) that you should keep private.
16	social media	Websites or apps where people share pictures, messages, or videos such as Instagram, TikTok, or Snapchat.
17	spam	Unwanted or junk emails and messages, often trying to sell something or spread viruses.
18	trolling	Posting upsetting or offensive messages online just to annoy others.
19	usernames	A name you use to sign into websites or games. Never use your real name.
Computer Systems and Components		
1	byte	A unit of digital data made up of 8 bits - it stores one letter, number, or symbol.
2	cable	A wire used to connect computer parts or devices and carry data or power.
3	computer	A machine that can store, process, and display data and information.
4	CPU	The "brain" of the computer - it processes instructions and carries out tasks.
5	desktop	A general purpose computer designed to stay in one place, usually on a desk, with separate parts like monitor and keyboard.
6	device	Any piece of technology, like a computer, tablet, phone, or printer.
7	graphics	Pictures or images shown on a screen or used in programs or games.
8	hardware	The physical parts of a computer you can touch, like the mouse, keyboard, and monitor.
9	input	Data sent into the computer using devices like a keyboard or mouse.
10	memory	The part of the computer that stores data and instructions while the

		computer is running.
11	mobile device	A small and portable computer like a smartphone or tablet.
12	monitor	A screen that shows what the computer is doing - also called a display.
13	motherboard	The main circuit board that connects all parts of the computer together.
14	output	Data that comes out of the computer, like sound from speakers or images on the screen.
15	port	A socket on a computer where you can plug in cables or devices (e.g. USB port).
16	processing	The work the CPU does to change input into useful output.
17	server	A powerful computer that stores data and shares it with other computers on a network.
18	storage	Where data is saved in a computer (e.g. hard drive or USB stick) for later use.
Programming		
1	algorithm	A step-by-step set of instructions to solve a problem or complete a task.
2	block	A visual piece of code that snaps together with other blocks to build a program.
3	bug	A mistake in your code that causes it not to work properly. Removing these is known as debugging.
4	code	The instructions you write to make a computer program.
5	coordinates	Numbers used to tell where a sprite is on the stage (x for left/right, y for up/down).
6	event	Something that starts a script, like clicking the green flag or pressing a key.
7	forever loop	A block that repeats the code inside it forever.
8	if block	A block that checks if something is true and runs code if it is.
9	input	Information that goes into a program, like key presses or mouse clicks.
10	iteration	Repeating a set of instructions, using loops like "repeat" or "forever".
11	output	What the program shows or does, like displaying text or playing a sound.
12	sprite	A character or object in Scratch that can move, change appearance, or perform actions.
13	sequence	The order in which instructions are run, one after another.
14	variable	A container that stores a value, like a score or a name, which can change during the program.
Spreadsheets		
1	absolute reference	A cell reference that doesn't change when copied. It uses \$ signs (e.g. \$A\$1).
2	cell	A single box in a spreadsheet where you can enter data.
3	cell reference	The name of a cell, using its column letter and row number (e.g. B3).
4	column	A vertical group of cells, labelled with letters (A, B, C...).
5	formatting	Changing the appearance of cells - like bold text, colour, font size, or number style.
6	formula	A calculation written in a cell that starts with = (e.g. =A1+B1).
7	function	A built-in formula in a spreadsheet, such as =SUM(A1:A5) or =AVERAGE(B1:B5).
8	model	A spreadsheet used to represent a real-world problem, like a budget or timetable.
9	numerical data	Numbers entered into a spreadsheet cell.
10	operator	A symbol used in formulas to do maths (e.g. +, -, *, /).

11	relative reference	A cell reference that changes when a formula is copied (e.g. A1 becomes A2).
12	row	A horizontal line of cells, labelled with numbers (1, 2, 3...).
13	text label	Words or titles used to describe data, like "Total" or "Quantity".
14	variable	A value that can change, often used in formulas or models to see how results are affected.



Sharp minds in Computer Science: where to look

- All lessons can be accessed from Google Classroom - even if you miss a lesson!
- Remember that homework in year 7 will always be on Genie:
<https://genie.hartismere.com>
- If you have any problems seeing the screen, with the brightness, with the colours, finding homework, with the equipment, or anything else, talk to your teacher - they can probably help!

Design and Technology

DESIGN & TECHNOLOGY : KEY TERMS, TOOLS AND MATERIALS

				
Tenon saw	Hack saw	Coping saw	Steel rule	Bench Vice
				
Try square	Bench hook	File	Disc sander	Power scroll saw

Hardwoods



Comes from deciduous trees

This is a broad-leaved tree which loses its leaves in the winter.

Beech
Oak
Ash
Teak

Softwoods



Comes from coniferous trees

This tree is an evergreen (green all year), needle-leaved, cone-bearing tree.

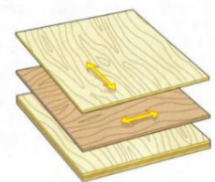
Pine
Spruce
Cedar
Fir

Manufactured boards

A manufactured board is a man-made wood product made by gluing or pressing wood pieces, fibres, or layers together to create strong, useful sheets like MDF, plywood, or chipboard.

Plywood

- Thin strips of wood glued together like a sandwich
- Glue is positioned between each layer
- In plywood each layer is positioned at 90°
- There are always an uneven number of sheets used

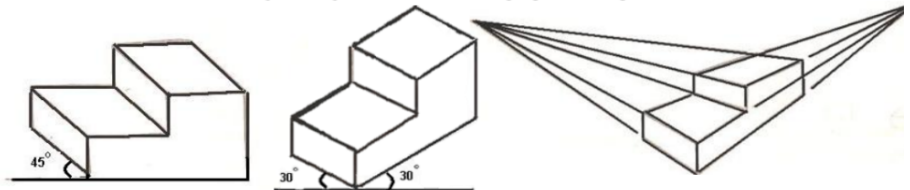


DESIGN BRIEF	DESIGN SPECIFICATION	PROTOTYPE	TEMPLATE
A short statement that explains what the product is, who it's for, and what it needs to do.	A list of clear, detailed requirements that the product must meet.	A working model or sample of a design used to test ideas and functions before final production.	A guide or pattern used to help accurately mark out or cut materials.

CHOOSING FERROUS VS NON-FERROUS METALS

	FERROUS	NON-FERROUS
CONTAINS IRON	☒	☐
HIGH MELTING POINT	☒	☐
DOES NOT RUST	☐	☒
NON-MAGNETIC	☐	☒
MALLEABLE	☐	☒
STRONGER (IN MOST CASES)	☒	☐

TECHNICAL DRAWING STYLES



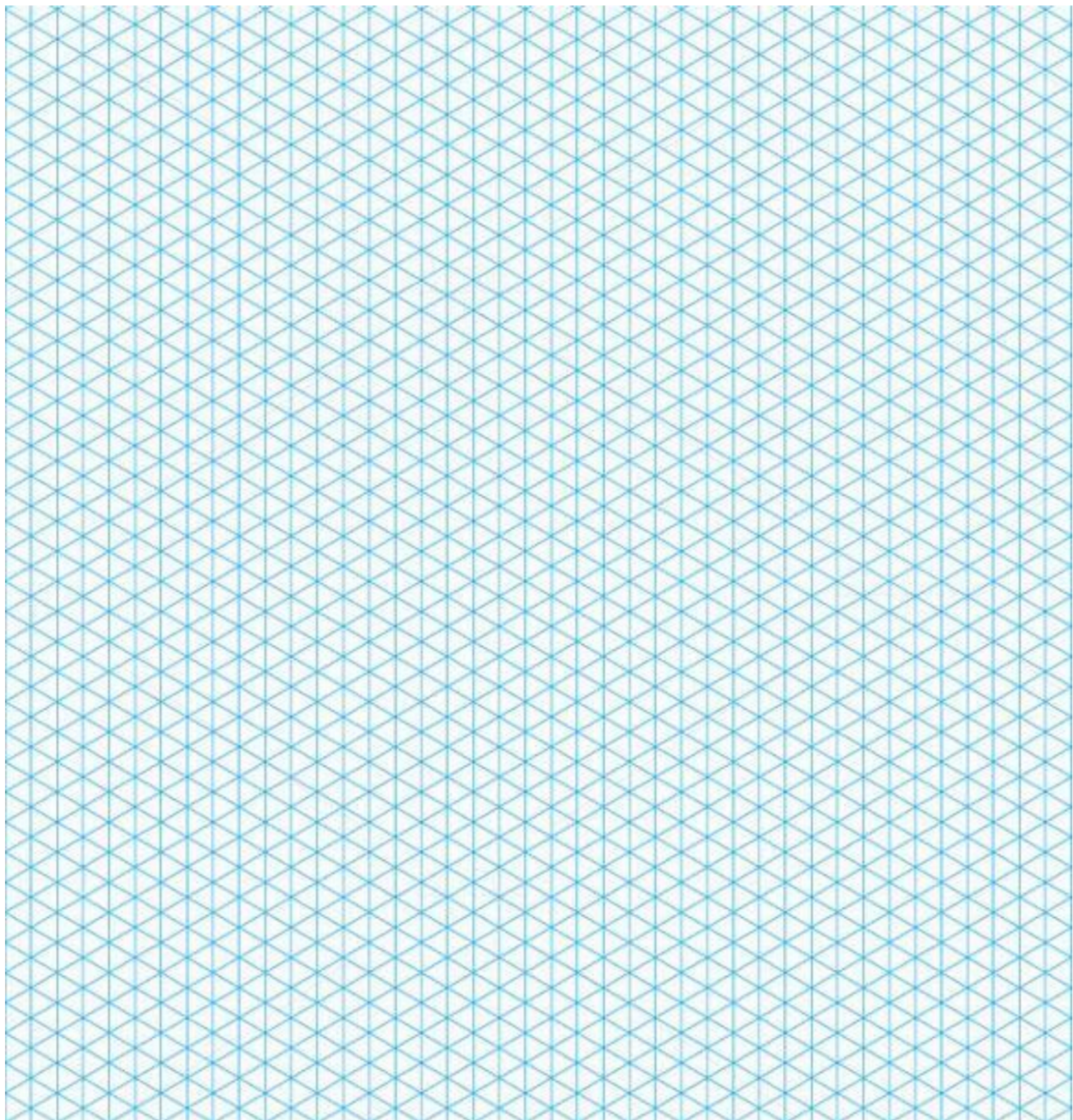
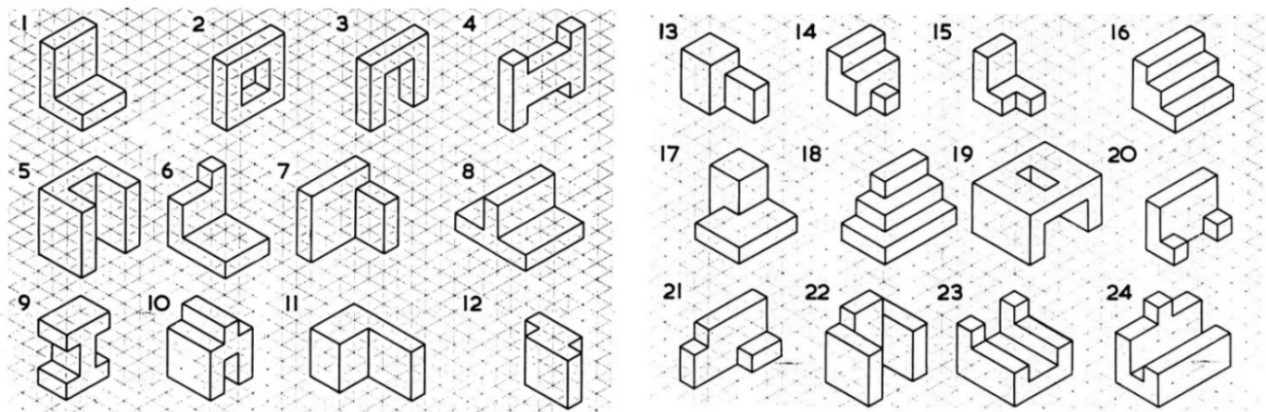
OBLIQUE A 3D drawing where the front face is flat and sides are angled.	ISOMETRIC A 3D drawing where all sides are drawn at 30° to give equal depth.	2 POINT PERSPECTIVE A 3D drawing that shows depth realistically with vanishing points.
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These words are commonly misspelt in lessons

Metal	Vice	Design	Tenon saw	Structure
Plastic	Try square	Safety	Glue	Disc sander

Practise drawing the shapes below.

ISOMETRIC DRAWING GRID



Drama

Theatre		
	Term or word	Definition
1	performance	A play in a theatre or on television or radio, or plays and acting generally.
2	audience	The people who watch the performance.
3	stage	The space in which a performance takes place.
4	character	A person or individual in the drama.
5	dialogue	A conversation between two or more people.
6	genre	A style of drama, for example, comedy, tragedy or horror.
7	devise	To create something as a group in response to a stimulus, leading to the creation of an original performance.

Drama strategies		
1	still image	Action that is frozen in time.
2	thought tracking	When a character steps out of a scene to address the audience about what they're thinking and feeling.
3	narration	One or more performers speak directly to the audience to provide information, commentary, or to tell the story.
4	hot seating	A drama strategy in which a character is interviewed by another.
5	role play	The ability of an actor to create a character.
6	marking the moment	A dramatic technique used to highlight a key moment in a scene.
7	cross cutting	Cutting across a split stage to a scene from a different time or place.
8	improvisation	Live theatre in which the plot, characters, and dialogue are made up in the moment.

Physical Skills		
1	physical skills	The way an actor uses movement and body language to create a character.
2	facial expression	Using the face to convey emotion.
3	body language	Using physical skills such as movement and posture to convey emotion.
4	gesture	The way people communicate with their hands or another part of the body.
5	gait	The way a character walks.
6	movement	The process of moving. especially change of place or position or posture.
7	posture	The position of a person's body when standing or sitting.
8	centring	The actor leading from a particular part of the body to symbolise character.
9	eye contact	Looking directly into someone's eyes.

Vocal skills		
1	vocal skills	The way an actor uses their voice to create a character.
2	voice projection	The strength of speaking whereby the human voice is used powerfully and clearly.
3	vocal tone	The way a person is speaking to someone, for example, angrily or kindly.
4	vocal pace	How fast or slow a character speaks.
5	vocal pitch	How high or low a character's voice sounds.
6	emphasis	Where a performer will stress a particular word to indicate importance.
7	accent	The way a character speaks that indicates where they are from.
9	volume	How loud or quietly the actor speaks.
10	pause	A short pause in speech or movement.

Spacial skills		
1	spatial skills	How the actor uses the stage space, for example, levels or proxemics.
2	proxemics	The use of space between actors and objects to communicate meaning and character relationships to the audience.
3	levels	The use of different heights on stage to signal status.
4	orientation	The direction an actor is facing.
5	stage directions	Instructions for how a character moves, or what they should be doing.
6	blocking	Where the characters must be positioned on stage.



Sharp minds in drama: where to look

- One of the best ways is to go to the theatre and cinema!
- You can join the play-reading group and the technical theatre club
- in school (see Mrs Davy for details)
- Take part in school productions and events. You don't have to perform - you can help out backstage, or with lighting and sound, make up or costume.

English

Writers' methods

	Term or word	Definition
1	simile	An indirect comparison where something is 'like' something or where 'as' is used. For example, "he is as brave as a lion".
2	metaphor	A direct comparison where something 'is' something else, for example, "That car is a beast".
3	precise verbs	These are strong, specific action words that create a clear picture (e.g. "sprinted" instead of "ran", "whispered" instead of "said").
4	Show, not tell	To describe a character's feelings or a scene through actions and details, instead of simply stating them (e.g. "her hands trembled" rather than "she was scared").
5	Characterisation	The way a writer builds and reveals a character's personality, through their actions, speech, thoughts, and appearance.

Word classes

6	verb	A word that usually conveys an action (read, walk, run), an occurrence (happen, become) or a state of being (be, exist).
7	adjective	A word that modifies (changes) a noun, e.g. the <u>blue</u> car; your cake is <u>bigger</u> than mine.
8	noun	Nouns are typically words for people, places, animals and objects (e.g. doctor, Peter, Paris, dinosaur) and also many words for abstract things such as feelings, emotions and qualities (e.g love, hope, mystery).
9	pronouns	Pronouns replace nouns or noun phrases, for example, 'We like Tom' → 'We like him.' 'I like my new bike.' → 'I like it.' Personal pronouns usually refer to people or other living things.
10	adverb	Adverbs typically modify (change) a verb, an adjective, another adverb or entire clause or sentence, e.g 'He wrote it down <u>quickly</u> '; 'The film ended <u>too</u> soon'.

Punctuation and grammar

11	Tip Top	A new paragraph should be started if there is a new time, person, topic or place.
12	comma ,	Used to signal a natural pause in a line.
13	full stop .	Used to indicate the end of a sentence.
14	capital letter	Always used at the beginning of a sentence, for 'I' and for proper nouns (e.g Sam).
15	semi-colon ;	A punctuation mark that shows a pause, typically between two main clauses. It could be replaced by a full stop to create two separate sentences, e.g 'It was the best of times; it was the worst of times'.

Writing and reading

16	genre	A category or type of writing (like horror, fantasy, or mystery) that has its own typical features and style.
17	convention	A typical feature expected in a genre (e.g. mythical creatures, magic, quests are conventions of fantasy).
18	inference	working out something the writer hasn't said directly, by using clues from the text and your own knowledge.
19	fiction	Writing about imagined people, places, or events; it isn't a true story.
20	non-fiction	Writing based on real facts, people, or events; it is true.

Key vocabulary

21	intriguing	Interesting or mysterious in a way that makes you want to know more.
22	vivid	Something described so clearly and colourfully that it feels real or easy to imagine.
23	identity	This is who a person is, made up of things like their personality, beliefs, culture, and experiences. In stories, this can also mean how a character sees themselves or how others see them.
24	subvert	To do the opposite of what is expected, often by breaking or twisting a typical genre convention (e.g. a "subverted" villain who turns out to be kind).
25	characteristic	A quality or feature that is typical of a person, thing, or genre (e.g. bravery could be a characteristic of a hero; dark settings could be a characteristic of horror).



Sharp minds in English: where to look

- In English, there is a sure-fire way to improve, and that's to read as much as you can. We know it's hard, with so many other things to distract you, but reading is fun and improves your work in all subjects, not just English.
- You could visit the library and speak to the librarian about the kind of books you enjoy. Try some new writers. If you don't like reading so much, tell her - we have books specifically for you!
- You could use the 'Good Reads' website to search for new ideas and recommendations
- You could join the HARRT (Hartismere Avid Readers Recommendations Team!) if you really enjoy reading - get together with other people and talk about all things books!
- You could watch a film of a favourite book
- Visit the theatre and cinema
- Explore poetry online using [poets.org](https://www.poets.org)
- You could use your Lexia login (if you have one) to complete another 20 minutes or your Wordshark login (if you have one) to complete another 20 minutes.

French

Classroom language

Bonjour [hello]	Aujourd'hui c'est [today is ...]
Bon journée [good morning]	lundi [Monday]
Bon après-midi [good afternoon]	mardi [Tuesday]
Au revoir [goodbye]	mercredi [Wednesday]
	jeudi [Thursday]
	vendredi [Friday]

Est-ce que je peux ... [Can I]	boire de l'eau [have a drink] aller aux toilettes [go to the toilet] enlever mon pull [take off my jumper]	s'il vous plait ? [please?]
Est-ce que je peux prêter ... [Can I borrow]	un stylo [a pen] un crayon [a pencil] une gomme [a rubber]	

Saying how I'm feeling

Ça va très bien [I'm very good] Ça va bien [I'm good] Bof, pas mal [Meh, not bad] Comme ça comme ça [so so] Ça va mal [I'm bad] Ça va très mal [I'm very bad]	merci et toi ? [thanks, and you?]
--	---

Introducing myself

Comment t'appelles –tu ?	What is your name?
Je m'appelle	My name is
Quel âge as-tu ?	How old are you?
J'ai ... ans	I am ... years old
Quelle est la date de ton anniversaire ?	When is your birthday?
Mon anniversaire c'est le....	My birthday is...
D'où viens-tu ?	Where are you from?
Je viens de...	I am from ...

Numbers

Un [1]	Onze [11]	Vingt-et-un [21]
Deux [2]	Douze [12]	Vingt-deux [22]
Trois [3]	Treize [13]	Vingt-trois [23]
Quatre [4]	Quatorze [14]	Vingt-quatre [24]
Cinq [5]	Quinze [15]	Vingt-cinq [25]
Six [6]	Seize [16]	Vingt-six [26]
Sept [7]	Dix-sept [17]	Vingt-sept [27]
Huit [8]	Dix-huit [18]	Vingt-huit [28]
Neuf [9]	Dix-neuf [19]	Vingt-neuf [29]
Dix [10]	Vingt [20]	Trente [30]

My family

As-tu des frères ou des sœurs ?	Do you have any brothers or sisters?
J'ai un / deux/ trois frère(s)	I have one/two/three brother(s)
Dans ma famille il y a personnes	In my family there are ... people
Ma mère s'appelle	My mum is called...
Il/Elle a ans	He /She is ... years old
Mes parents s'appellent...	My parents are called...
Ils/Elles ont.... ans	They (m/f) are years old
J'ai un chien noir	I have a black dog
Je n'ai pas d'animal	I don't have any animals
Je voudrais un chat	I would like a cat
J'avais un lapin	I used to have a rabbit

Where I live

Où habites-tu ?	Where do you live?
J'habite ...	I live ...
dans un village / une ville	In a village / a town
à la campagne / à la montagne	In the countryside / in the mountains
Il y a / il n'y a pas de	There is / there isn't
au rez-de-chaussée	On the ground floor
au premier étage	On the first floor
Dans ma chambre il y a	In my bedroom there is
un lit / un bureau	A bed / a desk
J'habitais	I used to live
Je voudrais habiter	I would like to live

La cuisine	The kitchen	La table	The table
Le salon	The living room	La chaise	The chair
Le jardin	The garden	Le placard	The cupboard
La salle de bains	The bathroom	La moquette	The rug

My school

Je me lève	I get up
Je vais au collège	I go to school
Je fais mes devoirs	I do my homework
Quelle est ta matière préférée ?	What is your favourite subject?
Ma matière préférée c'est...	My favourite subject is...
J'aime / J'adore / Je déteste	I like / I love / I hate
Parce que c'est	because it's
amusant / intéressant / difficile	fun / interesting / difficult
Le professeur est sympa	The teacher is nice
J'étudie	I study
J'ai besoin de	I need

Le français	French	L'espagnol	Spanish
L'anglais	English	L'histoire	History
les maths	Maths	La géographie	Geography
Les sciences	Science	Le dessin	Art

Sport

Es-tu sportif/ive ?	Are you sporty?
Tu aimes le sport ?	Do you like sport?
Je joue	I play
Je fais	I do
J'ai joué	I played
J'ai fait	I did
C'était	It was

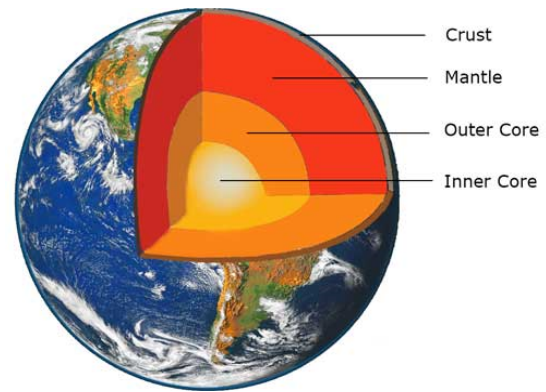
Le foot	football	Le vélo	biking
Le tennis	tennis	La randonnée	hiking
Le basket	basketball	La natation	swimming
Le volley	volleyball	L'équitation	horse riding
Le golf	golf	La voile	sailing



Sharp minds in French: where to look

- Duolingo - spend five minutes a day and you will see your progress
- Quizlet - access some flashcard sets or create your own to revise vocabulary
- Numbers <https://quizlet.com/996950/french-numbers-1-100-flash-cards/?i=3fi3u6&x=1jqt>
- Months <https://quizlet.com/228154456/french-months-flash-cards/?i=3fi3u6&x=1jqt>
- Family <https://quizlet.com/1763426/french-family-vocab-flash-cards/?i=3fi3u6&x=1jqt>
- Pets <https://quizlet.com/gb/390228693/french-pets-flash-cards/?i=3fi3u6&x=1jqt>
- BBC bitesize <https://www.bbc.co.uk/bitesize/subjects/zgdqxb>
- Watch some cartoons in French, how many words do you recognise? Start simple, Peppa Pig is a good one <https://www.youtube.com/watch?v=oCe8MpZi4Sg>

Geography



	Term or word	Definition
1	geomorphic processes	Natural processes that shape the earth such as weathering and erosion.
2	weathering	The breaking up of rock in situ (for example freeze thaw and biological weathering).
3	erosion	The breaking up and removing of rock by waves, wind, water.
4	deposition	Waves or a river don't have enough energy to carry the sand or pebbles and drop them.
5	longshore drift	The transportation of sediment parallel to the coast.
6	traction	The transportation of larger rocks in a rolling motion on the bottom of a river.
7	suspension	Sand carried by the river or sea – makes it look dirty.
8	saltation	The picking up and dropping of pebbles (in a bouncing or hopping motion).
9	geology	The study of rocks.
10	convection currents	The movement in the earth's mantle caused by the heating and cooling of magma – this makes the plates move on the surface.
11	tectonic plate	The crust is broken into pieces called plates.
12	shield volcano	Shield volcanoes have non violent eruptions and produce runny lava – they have a wide base and gentle gradient.
13	composite volcano	These are cone shaped and the eruptions are very explosive.
14	tsunami	A wave that is often formed as a result of an under the sea earthquake at a destructive plate boundary (the crust jolts upwards, displacing the water).
15	focus	Where the earthquake happens in the earth's crust.
16	epicentre	The location on the earth's surface directly above the focus.



Sharp minds in Geography: where to look

- Horrible Geographies - Earth shattering Earthquakes
- Raging Rivers, Anita Ganeri
- Rocks and Fossils Struan Reid
- The Carbon Diaries, Saci Lloyd
- Watching Documentaries: David Attenborough and Simon Reeve both have presented a wide range of documentaries on different topics and places

History

Anglo-Saxons: key terms

1	AD	AS stands for Anno Domini, which is Latin for 'in the year of the Lord'. It is a way of counting years based on the estimated birth of Jesus Christ. It is commonly used to describe all the years after the year 0.
2	BC	BC stands for 'Before Christ' and is a way of counting years before the estimated birth of Jesus. BC starts with the year before Christ's birth, 1 BC, and counts backwards to the year 10,000 BC. All years before the year 0.
3	chronology	Putting things in time order.
4	source	Evidence historians use to learn about the past. They are from the time.

1	Anglo Saxons	A mixture of the Angles, Saxons and Jutes who moved to Britain 1500 years ago.
2	Wessex	A powerful Anglo-Saxon kingdom. The only one that did not fall to the Great Heathen Army.
3	Alfred the Great	The Anglo-Saxon King of Wessex who defeated the Great Heathen Army. He ruled from 871-899 and is remembered for being wise, fair and brave.
4	Athelstan	Alfred's grandson. He became King of England after defeating the Vikings in the North.
5	Guthrum	Viking leader of the Great Heathen Army. He fought and made deals with Alfred.
6	burh	A town with a surrounding wall designed to protect against any future Viking attacks.
7	Danegeld	Money paid to the Vikings to put a stop to them stealing and killing Anglo-Saxons.
8	Danelaw	A large area of England that was ruled by Vikings after the Battle of Ashdown.
9	Great Heathen Army	A large Viking army that successfully invaded most of England.
10	Jorvik	Viking name for the city of York. This was their capital city.
11	monastery	A place where Christian monks live, work, pray and study the Bible.
12	pagan	Someone who believes in many gods. The Vikings were pagan.
13	Scandinavia	Where the Vikings come from. Today it is Denmark, Norway and Sweden.
14	Witan	Also Witenagemot. The King's council and his advisors that ruled England.

Anglo-Saxons: key dates

1	793	The first Viking attack on England on a monastery at Lindisfarne.
2	865	The Great Heathen Army invades England.
3	866	The important city of York is taken by the Great Heathen Army.
4	871	Alfred the Great defeats the Vikings at the Battle of Ashdown and Wessex remains free of Viking control.
5	878	Alfred the Great defeats Guthrum at the Battle of Edington.
6	890	Treaty of Wedmore. Alfred and Guthrum agree to divide England along an old Roman road.

Normans: key terms

1	Archbishop of Canterbury	The head of the Church in England.
2	chronicler	A kind of early historian who would write long books about what was happening at the time.
3	Harold Godwinson	The Anglo-Saxon king who was killed in the Battle of Hastings.
4	William the Conqueror	Known as William, Duke of Normandy before the Battle of Hastings and King William I after the Battle of Hastings.
5	hierarchy	An order of control. For example, Headteacher - Teacher - Students.
6	feudal system	A hierarchy that kept people stuck at their level for their whole lives such as King - Barons - Knights - Peasants.

7	barons	People with large amounts of money, land and power. Earls and dukes were barons.
8	chronicle	Another word for a long history book from medieval England.
9	consequence	When something happens directly as a result of something else. Can be immediately or a long time afterwards.
10	conquest	When you control somewhere after winning it through a battle.
11	Domesday Book	A book written under William the Conqueror that detailed the wealth and possessions of every single person in England.
12	duke	A Baron or nobleman. They would have lots of power and land.
13	earl	Also a baron or nobleman. They would have lots of power and land but not as much as a Duke.
14	motte and bailey castle	Hundreds built by William. Motte = Hill with a keep on it. Bailey = Village at the bottom of the hill.
15	rebellion	When people protest something, usually with violence.
16	Witan	A group of advisors to the king. Used to make decisions in Anglo-Saxon England.

Normans: key dates

1	1066	Battle of Hastings. William wins and becomes king.
2	1069	Harrying of the North. Responding to a rebellion in the North, William destroys and burns huge amounts of their crops and land.
3	1070	Rebellion at Ely. The Vikings attempt to invade England.
4	1086	Domesday Book published.
5	1087	William dies.

Middle Ages: key terms

1	Church	<u>A</u> Church is a local building where people go for support and prayer. <u>The</u> Church is all the churches, monasteries, abbeys and cathedrals as well as anyone who works for any of those buildings as well.
2	clergy	The people who work for the Church.
3	Crown	The king or queen. It refers to the idea of being king rather than the person that is the king.
4	Magna Carta	A treaty signed by the King and the nobles that gave people far more rights such as a right to a fair trial and no unfair taxes.
5	Poll Tax	The tax that prompted the Peasants' Revolt.
6	statute	Another word for a law.
7	Black Death	An extremely deadly disease that killed $\frac{1}{3}$ of the population of Britain. It came in two forms, Bubonic Plague and Pneumonic Plague.
8	revolt	An attempt to try to overthrow the ruler or leader.

Key people

1	Iain Mortimer	The historian who believes Black Death was the most significant event of the Middle Ages.
2	King Henry II	The king of England who fought with Archbishop Thomas Becket and had to apologise for his death.
3	King John	The king who was forced to sign Magna Carta.
4	Simon Sudbury	A very cruel leader who fell victim to the Peasants Revolt.
5	Thomas Becket	The Archbishop of Canterbury who fought with Henry II and was ultimately killed for sticking to his religious principles.

Middle Ages: key dates

1	1170	Archbishop Thomas Becket is killed.
2	1215	King John is forced to sign Magna Carta.
3	1348	Black Death hits England. It kills around $\frac{1}{3}$ of the population.
4	1381	The Peasants Revolt takes place. It ultimately fails but has huge long-term significance for peasants' rights.

Reformation: key terms

1	Church of England	The church created by Henry VIII that allowed him to divorce Catherine of Aragon.
2	dissolution	To get rid of something.
3	indulgences	The name given to donations of money or gifts to the Church in order to buy their way into heaven or have forgiveness for sins. This made the Church extremely wealthy.
4	Latin	The old language of the Romans. Bibles had for many years been translated into Latin.
5	Pilgrimage of Grace	A protest against Henry VIII's rule and the Church of England by Catholics in the north of England.
6	priory	A small monastery.
7	Protestantism	A branch of Christianity that wanted to make sure ordinary peasants had an understanding of God and the Bible, rather than just priests.
8	reformation	A time when the Church underwent great change. People began to question the Catholic Church and how to worship.
9	thesis	An idea or plan about how to change things (theses is the plural form).

Key people

1	Henry VIII	The King of England who left the Catholic Church.
2	Catherine of Aragon	Henry VIII's first wife. He was desperate to divorce her.
3	Anne Boleyn	Henry VIII's second wife. He had to leave the Catholic Church to marry her.
4	Archbishop of Canterbury	Head of the Church in England until the Reformation.
5	Martin Luther	A German priest who published his 95 Theses criticizing the Catholic Church.
6	Pope	The head of the Catholic Church.

Reformation: key dates

1	1476	The printing press arrives in England.
2	1517	Martin Luther's 95 Theses are published.
3	1529	Henry VIII asks the Pope to allow him to divorce.
4	1534	Henry VIII declares himself head of the Church of England. The Catholic Church no longer has authority in England.
5	1536	The Pilgrimage of Grace.

Witchcraft: key terms

1	witchcraze	A frantic few years where vast numbers of women were accused of being witches.
2	Catholic	A type of Christianity that was increasingly banned in England under Elizabeth I.
	Protestant	A type of Christianity. A newer type that was increasingly forced on the people of England under Elizabeth I.
2	condemned	Sentenced to a punishment.
3	conjure	To cause a ghost to appear as if by magic.
4	familiar	An animal that a witch would possess and bewitch by making it suck their blood to make sure it would do as she pleased.
5	Mass	A Catholic Church service.
6	poultice	A small bag of herbs used for healing.
7	spirit	Another word for a ghost.
8	superstitious	Believing that small tokens and habits have an impact on your life, for example, the belief that breaking a mirror leads to seven years of bad luck.

Key people

1	Matthew Hopkins	The famous Witchfinder General.
2	John Stearne	He aided Hopkins in his witchfinding mission.
3	Samuel Harsnett	He published a book which questioned whether people should really believe in demons.

Witchcraft: key dates

1	1542	Witchcraft is made illegal.
2	1547	Witchcraft is made legal again.
3	1563	Witchcraft is made illegal again.
4	1604	The Witchcraft Act makes witchcraft punishable by death.
5	1642-46	English Civil War.
6	1645-47	300-400 people are killed on suspicion of being witches

Multiples

The "times table" of a given number

All the numbers in this lists below are multiples of 3.

3, 6, 9, 12, 15...

This list continues and doesn't end

$3x, 6x, 9x \dots$

x could take any value and as the variable is a multiple of 3 the answer will also be a multiple of 3

Non example of a multiple

45 is not a multiple of 3 because it is 3×15

Not an integer

Factors

Arrays can help represent factors

5×2 or 2×5

Factors of 10
1, 2, 5, 10

10×1 or 1×10

The number itself is always a factor

Factors and expressions

$6x \times 1$ OR $6 \times x$

$2x \times 3$

Factors of $6x$

$6, x, 1, 6x, 2x, 3, 3x, 2$

$3x \times 2$

Prime numbers

- Integer
- Only has 2 factors
- and itself

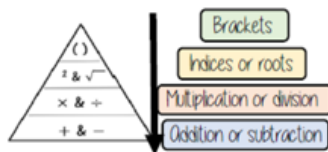
The first prime number
The only even prime number

2

Learn or how-to quick recall...

2, 3, 5, 7, 11, 13, 17, 19, 23, 29...

Order of operations



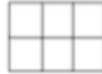
If you have multiple operations from the same tier work from left to right

eg $10 - 3 + 5 \rightarrow 10 - 3 \rightarrow 7 + 5$

$$6 \times 4 + 8 \times 2 = 24 + 16 = 40$$

Area problems

Rectangle
Base $\times$ Perpendicular height



Parallelogram/ Rhombus
Base $\times$ Perpendicular height



Triangle
 $\frac{1}{2} \times$ Base $\times$ Perpendicular height



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

Properties of Quadrilaterals

Square

All sides equal size
All angles 90°
Opposite sides are parallel



Rectangle

All angles 90°
Opposite sides are parallel



Rhombus

All sides equal size
Opposite angles are equal



Parallelogram

Opposite sides are parallel
Opposite angles are equal
Co-interior angles

Trapezium

One pair of parallel lines

Kite

No parallel lines
Equal lengths on top sides
Equal lengths on bottom sides
One pair of equal angles

Classify angles



Acute Angles
 $0^\circ < \text{angle} < 90^\circ$



Obtuse
 $90^\circ < \text{angle} < 180^\circ$



Reflex
 $180^\circ < \text{angle} < 360^\circ$



Right Angles
 90°

Right angle notation



Straight Line
 180°

Like and unlike terms

Like terms are those whose variables are the same



and



are like terms

the variable is the same



3

are unlike terms

the variables are NOT the same

Examples and non-examples

Like terms

$y, 7y, 2x^2, x^2, ab, 10ba, 5, -2$

Un-like terms

$y, 7x, 2x^2, 2c^2, ab, 10a, 5, -2t$

Note here ab and ba are commutative operations, so are still like terms

Key FDP Conversions

Fraction	Decimal	Percentage
$\frac{1}{2}$	0.5	50%
$\frac{1}{4}$	0.25	25%
$\frac{1}{3}$	0.33333	33.333%
$\frac{1}{5}$	0.2	20%

Maths, continued

	Term or word	Definition
1	coefficient	A multiplicative factor in front of a variable e.g. $5x$ (5 is the coefficient, x is the variable).
2	element	Each item in a set is called an element.
3	equality	Two expressions that have the same value.
4	equation	A mathematical statement that two things are equal.
5	expression	A maths sentence with a minimum of two numbers and at least one math operation (no equals sign).

6	factor	Integers that multiply together to get another number.
7	fair	There is zero bias, and all outcomes have an equal likelihood.
8	frequency	The number of times a data value occurs.
9	function	A relationship that instructs how to get from an input to an output.
10	HCF	Highest common factor (biggest factor two or more numbers share).

11	integer	A whole number that is positive or negative.
12	interior angles	Angles inside the shape.
13	intersection	The overlapping part of a Venn diagram (AND $\cap$).
14	inverse	The operation that undoes what was done by the previous operation, (the opposite operation).
15	isosceles triangle	A triangle with two angles the same size and two angles the same size.

16	LCM	Lowest common multiple (the first time the times table of two or more numbers match).
17	linear	The difference between terms increases or decreases by the same value each time.
18	median	A measure of central tendency (middle, average) found by putting all the data values in order and finding the middle value of the list.
19	multiples	Found by multiplying any number by positive integers.
20	mutually exclusive	Events that do not occur at the same time.

Maths continued

21	non-linear	The difference between terms increases or decreases in different amounts.
22	perimeter	The distance/ length around a 2D object.
23	prime	An integer with only 2 factors.
24	probability	The likelihood of an event happening.
25	product	To multiply terms.

26	random	Something happens by chance and is unable to be predicted.
27	range	The difference between the largest and smallest numbers in a set.
28	right-angled triangle	A triangle with a right angle.
29	scalene triangle	A triangle with all different sides and angles.
30	sequence	Items or numbers put in a pre-decided order.

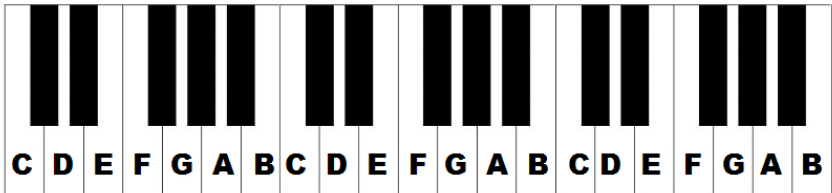
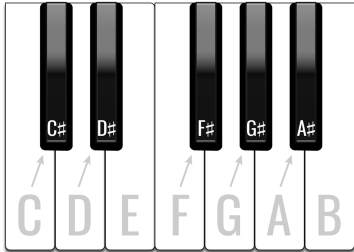
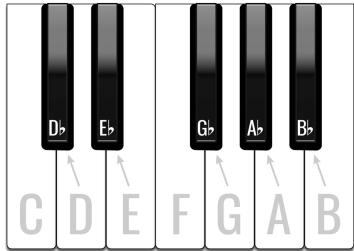
31	set	A collection of things.
32	substitute	Replace one variable with a number or new variable.
33	sum	Total, add all the interior angles together.
34	term	A single number or variable.
35	union	Two ellipses that join (OR $\cup$).
36	vertically opposite	Angles formed when two or more straight lines cross at a point.



Sharp minds in maths: where to look

- Parallel Maths by Simon Singh <https://parallel.org.uk/>
This contains a selection of problem-solving and rich maths tasks.
- Corbett Maths <https://corbettmaths.com/>
This contains video clips and worksheets (with answers) for every module in maths.
- Sparx Maths
Try completing the Booster XP questions in your Sparx Maths
- Brilliant.org
A selection of problem-solving and rich maths tasks
- <https://nrich.maths.org/students/secondary>
Lots of challenging problem-solving activities designed by Cambridge University for secondary school students

Music

	Term or word	Definition
1	string	A family of instruments including violin, cello and guitar.
2	pizzicato	Plucking on a string instrument, rather than using the bow.
3	woodwind	A family of instruments including flute, clarinet and saxophone.
4	brass	A family of instruments including trumpet, trombone and tuba.
5	percussion	A family of instruments including drum kit and xylophone.
6	orchestra	An ensemble containing string, woodwind, brass and percussion instruments.
7	C is to the left of the two black keys!	
8	chord	3 notes played at the same time, constructed using the rule: <i>play a note – miss a note – play a note – miss a note – play a note</i> (eg. CEG).
9	riff	A short, catchy musical idea which repeats over and over again.
10	sharp (#)	A black note on the keyboard to the right (up from) the normal note: 
11	flat (♭)	A black note on the keyboard to the left (down from) the normal note: 
12	rhythm	The pattern of long and short notes.
13	beat	The pulse of the music (what you tap your foot to!)
14	tempo	How fast or slow the music is.
15	crotchet 	A note held for 1 beat.

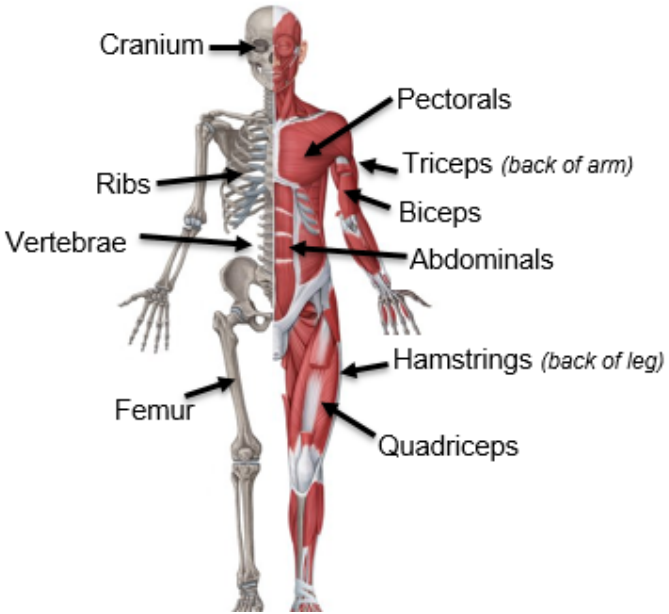
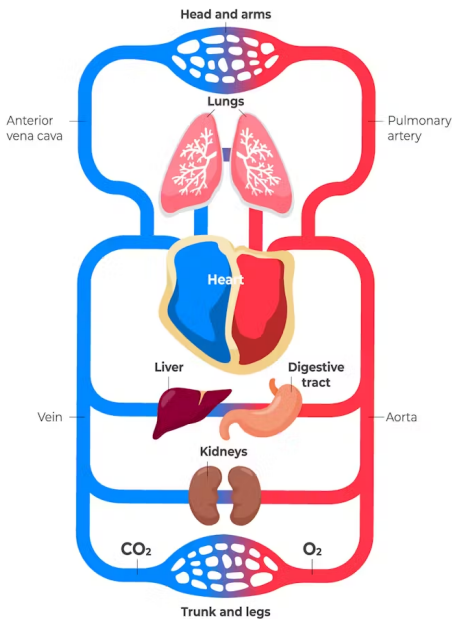
16	minim 	A note held for 2 beats.
17	dotted minim 	A note held for 3 beats.
18	semibreve 	A note held for 4 beats.
19	quaver 	A note held for ½ beat.
20	semiquaver 	A note held for ¼ beat.
21	crotchet rest 	A silence lasting 1 beat.
22	ostinato	A repeating musical idea (either a melody, a rhythm, or some chords).
23	structure	The way a piece of music is made up of smaller sections, some of which may be repeated, eg. ABAB.
24	texture	The 'layers' in a piece of music (can be described as thick or thin).
25	dynamics	How loud or quiet the music is.
26	time signature	Numbers at the start of a piece of music which tell you how many beats per bar, eg.: 2/4 = 2 beats per bar; 3/4 = 3 beats per bar; 4/4 = 4 beats per bar.
27	pitch	How high or low the notes are.
28	notes in spaces in treble clef	Spell FACE: 
29	notes on lines in treble clef	Stand for Every Green Bus Drives Fast: 



Sharp minds in music: where to look

- Attend an extra-curricular music club for at least a term
- Take part in the school production
- Attend a concert or production, either within or outside school

PE

1	Bone names & locations: • cranium • femur • ribs • vertebrae	
2	Muscles names & locations: • biceps • triceps • quadriceps • hamstrings • abdominals • pectorals	
3	The basic mechanics of breathing:	Inspiration: the diaphragm contracts and flattens, intercostal muscles contract, ribs move up and out. Expiration: the diaphragm relaxes and returns to dome shape, intercostal muscles relax and ribs move downwards.
4	The basic pathway of blood around the body (heart, lungs & body).	Human circulatory system 
5	Heart rate (bpm)	The number of times the heart beats per minute.
6	The immediate effects of exercise	• Increase in heart rate • Increase in body temperature, • Increasing in breathing rate • Sweating

7	The long term effect of exercise	• Cardiac hypertrophy (size of heart increases) • Increased stroke volume (amount of blood pumped per beat increases) • Increased stamina • Increased flexibility • Decreased resting heart rate
8	Movements: Flexion Extension Rotation	Flexion: decrease in the angle of bones at a joint Extension: increase in the angle of bones at a joint Rotation: a circular movement around a joint or, in other words, a movement around an axis.
9	Health	A state of physical mental & social well-being & not merely the absence of disease or infirmity.
10	Recognise the following components of fitness:	• cardiovascular endurance • agility • reaction time • balance • speed • flexibility • strength • power • co-ordination • muscular endurance
11	continuous training	This involves working for a sustained period of time without rest.
12	circuit training	This involves a series of exercises, called stations, which are completed one after another, with a brief period of rest in between.
13	injury prevention methods	• Warm up & cool down • Hydration • Wear appropriate clothing
14	sporting etiquette	'Unwritten rules', for example, kicking a ball out when someone is injured.
15	sportsmanship	Conforming to rules and being gracious whether winning or losing.
16	diet	Carbohydrates: main energy source Fat: energy source. Protein: builds / repairs muscle Vitamins & minerals: maintain general health



Sharp minds in PE: Where to look

- 'PE 4 LIFE Home Workouts' google classroom. You will find various teacher-led warm ups, workouts and sporting challenges as well as local community sports clubs you can join.
- Your class 'PE homework / Enrichment tasks' Google Classroom. Improve your knowledge & tactical understanding in each sport by completing the sports-specific enrichment tasks.
- Sky Sports news / BBC Sport. Keep up to date with all sporting events.
- Watch LIVE sport. Watching live sports will help to improve your knowledge, tactics, rules and skills of analysis.

Physics

Energy is found in stores, there are several different ways energy can be stored, these are the following:

8 Energy Stores



Chemical



Elastic



Gravitational potential



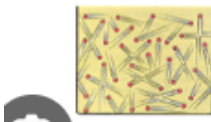
Nuclear



Kinetic



Magnetic



Thermal



Electrostatic

Here are the circuit symbols you need to know to study electricity:



Switch



Cell



Battery



Lamp



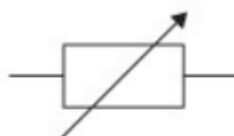
Voltmeter



Ammeter



Resistor



Variable resistor



Motor

Electricity can be generated via renewable and non-renewable energy resources. Learn the terms in the table.

	Term or word	Definition
1	fossil fuels	Fossil fuels are combusted to heat water to produce steam to turn turbines to generate electricity.
2	nuclear	Nuclear fuels are reacted to heat water to produce steam to turn turbines to generate electricity.
3	bio-fuels	Plant matter, ethanol or methane can be produced and used as a fuel in place of fossil fuels.
4	wind	Wind turns turbines directly to generate electricity.
5	hydroelectric	Water is stored at a height, and when released, rushing water turns turbines directly to generate electricity.
6	tidal	The movement of water due to tides, turns turbines directly to generate electricity.
7	geothermal	Hot rocks underground are used to heat water to produce steam to turn turbines which generate electricity.
8	solar	Solar cells use light to generate electricity. Solar panels use thermal radiation to heat water to produce warm water for household use.
9	water waves	Moving water due to waves turn turbines directly to generate electricity.

For 'sharp minds', see the science pages.

Religious Studies

Christianity

	Term or word	Definition
1	Bible	The holy book of Christianity.
2	Jesus	Christians believe Jesus is the son of God.
3	Bethlehem	The birthplace of Jesus.
4	Easter	When Christians celebrate the death and resurrection of Jesus.
5	Genesis	The name of the first book of the Bible.
6	Holy Trinity	The name given to the father (creator), the son (the loving side of God) and the holy spirit (silent guidance). Each part represents a different quality of God.
7	Old Testament	The first part of the Christian Bible, comprising 39 books.
8	New Testament	The second part of the Christian Bible, written originally in Greek and recording the life and teachings of Christ.

Judaism

	Term or word	Definition
1	Torah	The holy book of Judaism.
2	synagogue	The Jewish place of worship.
3	Moses	He led the Jewish people out of slavery in Egypt.
4	Shabbat	The Jewish day of rest.
5	Passover (Pesach)	A festival celebrating the Jewish escape from Egypt.
6	menorah	A candelabra with seven branches used in Jewish worship.
7	Hannukkah	A special 8-day festival of light and freedom where a menorah is lit.
8	kosher	Food that is prepared according to Jewish law.
9	Tefillin	A small box worn on the arm or forehead during prayer.

Islam

	Term or word	Definition
1	Quran	The holy book of Islam.
2	Allah	God.
3	Prophet Muhammad (peace be upon him)	The prophet who received the final revelation from Allah.
4	mosque	The name of the Islamic place of worship.

5	Ramadan	The name of the Islamic month of fasting; it is a time of spiritual reflection, self-discipline and obedience to God. Fasting takes place from dawn to sunset.
6	Eid al-Fitr	The festival which marks the end of Ramadan.
7	Mecca	Birthplace of the Prophet Muhammad (peace be upon him)
8	Hajj	The pilgrimage to Mecca.



Sharp minds in RS: Where to look

- Complete RS challenge cards. These can be found in your religious studies classroom.
- YouTube: 'My life, My religion' series
- Take part in the RS 'Spirited Arts' competition

Science

	Term or word	Definition
1	accuracy	Results are considered accurate if they are close to the true value.
2	anomaly	A result which does not fit with the pattern seen in the rest of the results.
3	data	Information collected in an experiment.
4	evidence	Information collected by observation or measurement that supports a scientific prediction or hypothesis.
5	error	The difference between a measured value and the true value.
6	random error	Readings spread about the true value. These can be larger or smaller and cannot be corrected but can be reduced.
7	systematic error	Readings vary by the same amount each time. Can be removed or corrected by repeating with a new technique or equipment.
8	zero error	Occurs when a system displays a false reading when the true value is zero.
9	hazard	Something that could cause harm.
10	hypothesis	A prediction based on scientific reasoning.
11	interval	The quantity or space between readings.
12	mean	A type of average. Calculated by adding all the values up and then dividing by the number of values
13	prediction	A statement suggesting what will happen in the future.
14	precaution	Something that reduces the risk of harm.
15	precision	If repeat measurements do not vary much around the mean value they are precise. If there is a large spread in repeat readings precision is low.
16	range	The maximum and minimum values of the variables.
17	risk	How likely harm is to be caused.
18	repeatable	When repeating an experiment the same scientist gets the same results with the same method and equipment.

19	reproducible	When a different scientist or a different method or equipment gets the same results or trend.
20	resolution	Smallest change in what is measured that gives a detectable change on the measuring equipment.
21	true value	Value that would be obtained in an ideal measurement.
22	uncertainty	Interval within which the true value can be expected to lie. For example a measurement of a leaf of 3.5 +/- 0.2 cm means the length could be anywhere between 3.3cm and 3.7cm.
23	validity	Suitability of an experiment to answer the question being asked.
24	valid data	An experiment in which only the independent variable affects the dependent variable.
25	valid conclusion	A conclusion supported by valid data from an appropriate experiment.
26	categoric variable	Variables with values that are labels or set categories, for example, eye colour.
27	continuous variable	Variables with values that are measured or counted and take any value. For example temperature or time.
28	control variable	Something that could affect the outcome and should be kept constant.
29	dependent variable	Variable that is measured.
30	independent variable	The variable that is being changed in an investigation.



Sharp minds in Science: where to look

- Book: "Exploring the Elements" by Isabel Thomas
A colourful and engaging introduction to the periodic table, perfect for younger students.
- YouTube Channel: SciShow Kids
Short, fun science videos on a wide range of topics, explained clearly and simply.
- Activity: Royal Institution's "ExpeRimental" series
Free science experiments using everyday materials, ideal for doing at home with supervision.
- Film: "Hidden Figures" (PG)
An inspiring true story about female scientists at NASA, great for learning about space and engineering.
- Podcast: "Brains On!"
A kid-friendly science podcast answering curious questions about the world, with expert guests and fun explanations.

Spanish

Classroom language

¡Hola! [hello / hi]	Hoy es [today is ...]
Buenos días [good morning]	lunes [Monday]
Buenas tardes [good afternoon]	martes [Tuesday]
Adiós [goodbye]	miércoles [Wednesday]
	jueves [Thursday]
	viernes [Friday]
	sábado [Saturday]
	domingo [Sunday]
	Fin de semana [the weekend]

¿Puedo ... [Can I]	beber agua [have a drink] ir al baño [go to the toilet] quitarme el jersey [take off my jumper]	por favor? [please?]
¿Me dejas ... [Can I borrow]	un boli [a pen] un lápiz [a pencil] una goma [a rubber]	

How I am feeling

Estoy [I am]	genial [great] muy bien [very well] bien [well] regular [so so] mal [bad] muy mal [very bad] fatal [awful]	gracias, ¿y tú? [thanks, and you?]
---------------------	---	--

Introducing myself

¿Cómo te llamas?	What's your name?
Me llamo	My name is
¿Cuántos años tienes?	How old are you?
Tengo ... años	I am ... years old
¿Cuándo es tu cumpleaños ?	When is your birthday ?
¿De dónde eres ?	Where are you from ?
Soy de ...	I am from ...

Numbers

Uno [1]	Once [11]	Veintiuno [21]
Dos [2]	Doce [12]	Veintidós [22]
Tres [3]	Trece [13]	Veintitrés [23]
Cuatro [4]	Catorce [14]	Veinticuatro [24]
Cinco [5]	Quince [15]	Veinticinco [25]
Seis [6]	Dieciséis [16]	Veintiséis [26]
Siete [7]	Diecisiete [17]	Veintisiete [27]
Ocho [8]	Dieciocho [18]	Veintiocho [28]
Nueve [9]	Diecinueve [19]	Veintinueve [29]
Diez [10]	Veinte [20]	Treinta [30]
		treinta y uno [31]

My family

¿Tienes hermanos?	Do you have any brothers / sisters?
Tengo un/dos/tres hermanos	I have 1/2/3/brothers
En mi familia hay ... personas	In my family there are ... people
Mi madre se llama ...	My mum is called ...
Tiene ... años	He / she is years old
Mis abuelos se llaman ...	My grandparents are called ...
Tienen ... años	They are ... years old
Tengo un perro negro	I have a black dog
Me gustaría tener un caballo	I would like to have a horse
Tenía un conejo	I used to have a rabbit

Colours

Azul	Blue	Rojo	Red
Verde	Green	Amarillo	Yellow
Blanco	White	Negro	Black
Marrón	Brown	Naranja	Orange
Rosa	Pink	Morado	purple

Where I live

¿Dónde vives?	Where do you live?
Vivo en ...	I live in ...
En el norte / sur / este / oeste	In the North/ South / East / West
Vivía en...	I used to live in ...
Me gustaría vivir en ...	I would like to live in ...
En mi casa hay ... habitaciones	In my house there are ... rooms
Arriba hay ...	Upstairs there is ...
Abajo hay ...	Downstairs there is ...
En mi dormitorio	In my bedroom
No hay	There isn't / aren't

Delante	In front of
Detrás	Behind
Al lado	Next to
Debajo	Under
Encima de	On
En frente de	opposite

La cocina	The kitchen	La mesa	The table
El salon	The living room	La silla	The chair
El jardín	The garden	El armario	The cupboard
El cuarto de baño	The bathroom	La alfombra	The rug

My school

Me levanto	I get up
Como	I have lunch
Hago los deberes	I do my homework
¿Cuál es tu asignatura favorita?	What is your favourite subject?
Mi asignatura favorita es ...	My favourite subject is ...
Me gusta / me encanta / odio	I like / I love / I hate
Porque es ...	Because it is ...
¿Cómo es tu instituto?	What is your school like?
Mi instituto es grande / pequeño	My school is small / big
Está en ...	It is in ...

El inglés	English	Las matemáticas	Maths
El dibujo	Art	Las ciencias	Science
La historia	History	El español	Spanish
La geografía	Geography	El francés	French

Un libro	A book
Un lápiz	A pen
Una goma	A rubber
Un estuche	A pencil case
Un boli	A pen

Sport

¿Qué deporte haces?	What sport do you do?
¿Te gusta ...?	Do you like ...?
Juego a ...	I play ...
Hago ...	I do ...
Ayer	Yesterday ...
Jugué a ...	I played ..
Hice ...	I did ...
Fue divertido / aburrido	It was fun / boring

Juego ... / jugué ...		Hago ... / hice ...	
Al fútbol	Football	Natación	Swimming
Al baloncesto	Basketball	Equitación	Horse riding
A las cartas	Cards	Footing	Jogging
Al ajedrez	Chess	Gimnasia	gymnastics



Sharp minds in Spanish: where to look

- Duolingo - spend five minutes a day and you will see your progress
- Quizlet - access some flashcard sets or create your own to revise vocabulary
- Numbers
<https://quizlet.com/gb/969290429/los-numeros-1-31-flash-cards/?i=3fi3u6&x=1jqt>
- Months
<https://quizlet.com/gb/927633051/los-meses-del-ano-flash-cards/?i=3fi3u6&x=1jqt>
- Family <https://quizlet.com/gb/875373605/mi-familia-flash-cards/?i=3fi3u6&x=1jqt>
- Pets <https://quizlet.com/gb/906451602/mascotas-pets-flash-cards/?i=3fi3u6&x=1jqt>
- BBC bitesize <https://www.bbc.co.uk/bitesize/subjects/zfckjxs>
- Watch some cartoons in Spanish, how many words do you recognise? Start simple, Peppa Pig is a good one <https://www.youtube.com/watch?v=8EtuM5xgpn0&t=569s>

Quizzing pages**Subject:**

You could practise here, or use your rough book.

	Word or term	Definition
1		
2		
3		
4		
5		

Cover up this box for your next go!

Attempt 2

	Word or term	Definition
1		
2		
3		
4		
5		

Cover up this box for your next go!

Attempt 3

	Word or term	Definition
1		
2		
3		
4		
5		

Subject:

	Word or term	Definition
1		
2		
3		
4		
5		

Cover up this box for your next go!

Attempt 2

	Word or term	Definition
1		
2		
3		
4		
5		

Cover up this box for your next go!

Attempt 3

	Word or term	Definition
1		
2		
3		
4		
5		

Subject:

You could practise here, or use your rough book.

	Word or term	Definition
1		
2		
3		
4		
5		

Cover up this box for your next go!

Attempt 2

	Word or term	Definition
1		
2		
3		
4		
5		

Cover up this box for your next go!

Attempt 3

	Word or term	Definition
1		
2		
3		
4		
5		

Sharp minds...

You should record here the things you've done to really stretch yourself. Each time you complete a section, let your tutor know.

Bronze 3 Hart Points 	Subject	Add details of what you've done
	Tutor signature	

Silver 5 Hart Points 	Subject	Add details of what you've done
	Tutor signature	

Gold 10 Hart Points Letter home Reward! 	Subject	Add details of what you've done
	Tutor signature	