

Revise your French vocabulary every week, ready for a Quiz in lesson on the week starting on the 2nd of October.

Topic 1: Les salutations. Greetings.

<u>L'alphabet – The alphabet</u>

A ah	B bay	C say D day	E ugh!
F eff	G zhey	H ash I ee	J zhee
K ka	L el	M em N en	O oh
P pay	Q koo	R err S ess	T tay
U 00	V vay	W doo bl vay X iks	Y ee-grec
Z zed			

• Comment t'appelles-tu? What is your name?

• Je m'appelle Charlie. My name is Charlie.

• Et toi? And you?

• Ça s'écrit comment? How do you write it?

• C-H-A-R-L-I-E (say, ash, ah, err, el, ee, egh).

Les salutations - *Greetings*

• Bonjour! Hello/Good morning

• Salut! Hi

• Comment ca va? How are you?

• Ça va? Are you ok?

• Ça va (très) bien I'm (very) well.

• Merci. Thank you.

• Ça ne vas pas! Not good!

• Et toi? And you?

• Au revoir Goodbye

À plus! See you later



Mon âge – My age

• Quel âge as-tu? How old are you?

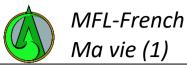
• J'ai (11 / onze) ans. I am (11/eleven) years old.

• **Et ton frère?** And your brother?

II a (5 cinq) ans. He is (5/five) years old.

Et ta sœur? And your sister?

• Elle a (20 vingt) ans. She is 20 years old.



Topic 2: Les dates. Dates.

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Les jours de la semaine The days of the week

- Lundi *Monday*
- Mardi Tuesday
- Mercredi Wednesday
- **Jeudi** Thursday
- Vendredi Friday
- Samedi Saturday
- Dimanche Sunday

Mon anniversaire - My birthday

- C'est quand, ton anniversaire? When is your birthday?
- Mon anniversaire, c'est le (15 mars).
 My birthday is on the (15th of March).



- Quelle est la date d'aujourd'hui? What is today's date?
- C'est dimanche, le 1^{er} Octobre It is Sunday, the 1st October.
- **Le premier** the first

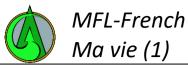
<u>Les nombres - Numbers</u>

/ \			
0 zéro	10 dix	20 vingt	30 trente
1 un	11 onze	21 vingt-et-un	31 trente-et-un
2 deux	12 douze	22 vingt-deux	•••
3 trois	13 treize	23 vingt-trois	
4 quatre	14 quatorze	24 vingt-quatre	40 quarante
5 cinq	15 quinze	25 vingt-cinq	50 cinquante
6 six	16 seize	26 vingt-six	60 soixante
7 sept	17 dix-sept	27 vingt-sept	
8 huit	18 dix-huit	28 vingt-huit	
9 neuf	19 dix-neuf	29 dix-neuf	

<u>Les mois de l'année</u> The Months of the Year

- -----
- Janvier January Février February
- Mars March
- Avril April
- Mai May
- Juin June
- Juillet July
- Août August
- **Septembre** September
- Octobre October
- Novembre November
- **Décembre** December





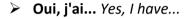
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Topic 3. Grammaire. *Grammar.*

Mes frères et mes soeurs = *My brothers and sisters*

> As-tu des frères et des soeurs?

Do you have brothers and sisters?



• un frère. one brother.

• une sœur. one sister.

• **un demi-frère.** *one half/step brother.*

• (deux) frères. (two) brother.

• (trois) demi-sœurs. (three) half/step sister.

Je n'ai pas de frères et sœurs.
I don't have any brothers or sisters.

> Je suis fils/fille unique. I am an only child

Grammaire - Articles

le/la/les: "the"

un/une/: "a/an"

des: "some"

In French, nouns are either masculine or feminine. Articles change according to gender and number of the noun they come before.

Les pronoms personnels

- je l
- tu you
- il he
- elle she
- on we
- nous we
- vous you (plural)
- ils (masculine) they
- **elles** (feminine) they



Important verbs : AVOIR and ÊTRE

AVOIR	TO HAVE
j' ai	I have
tu as	you have
il/elle/on a	He/she/we has/have
nous avons	we have
vous avez	you (plural) have
ils/elles ont	they have

ÊTRE	TO BE
je suis	l am
tu es	You are
il/elle/on est	He/she / we is/are
nous sommes	we are
vous êtes	you (plural) are
ils/elles s ont	they are

<u>Connectives</u> to use in your writing tasks:

- et and
- mais but
- aussi also

Topic 1: Poetic Techniques

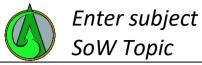
In a poem, a writer uses language, form and structure to present an idea in a new way; the words on the page become a way to communicate between the poet's mind and the readers. When reading poetry, a reader will interpret what it means to them. Everyone's response is different.

Poets use techniques such as:

<u>Technique</u>	<u>Definition</u>	<u>Example</u>
Rhyme	Words that sound the same	Cloud and crowd
Simile	When you compare two things using 'as' or 'like'	As brave as a lion
Metaphor	When you say something is something else but you know it can't be	She's a star
Alliteration	When words placed together start with the same letter	She sells sea shells
Oxymoron	When two words are placed together with opposite meanings	Terribly kind The silence was deafening
Onomatopoeia	Words that sound like what they are	Bang, Crash, Splash
Repetition	When words or phrases are written more than once	Run, run, run
Imagery	When an image is created for the reader through the description	The buildings were covered in golden light from the sun
Personification	When objects are given human qualities	The trees were dancing in the wind
Emotive Language	Language used to describe or evoke an emotion	The animals had been brutally murdered







Topic 2: Writing about Poetry

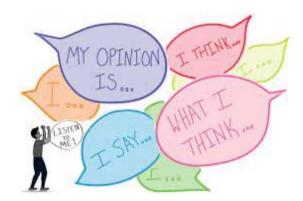
When writing about poetry, it is also important to think about the **structure** of a poem. **Structural** techniques include:

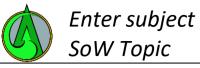
- Narrative perspective: is the poem written in first or third person? How will this affect our understanding of the text?
- Rhyme scheme: does the poem have words that rhyme? Does it follow a pattern? If yes, then the poem will have a set rhyme scheme
- **Free verse**: a poem that doesn't rhyme has been written in free verse.
- Rhyming **couplet**: two lines next to each other that rhyme
- **Sonnet**: a type of poem that has 14 lines and has a regular rhyme scheme
- **Enjambment**: When a sentence carries on past the end of the line

When we write about poetry, we should use the following opinion paragraph structure:

1 – Reword question	The writer *reword question* because *writer's name* has made me feel that because
2 – Select a quotation	I know this because of the sentence/phrase
3 – Explain how your quotation links to the question	This makes me feel/think aboutbecause The writer has used this to make me feel/thinkbecause
4 – Write your own opinion about the quotation you've used	When I read this sentence/phrase, I am supposed to think aboutbecause

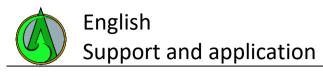






Topic 2: Linking poems to themes

<u>Poem</u>	Theme of Conflict	Theme of Power
Fury by David Morley	 The poem is about a boxer who fights for a living. In the poem, the speaker talks about how conflict is resolved with violence in his family. Conflict is dealt with violence rather than communication. The speaker's love of conflict and violence has cost them their family because they spend so much time away. 	 The speaker feels that in order to have power over someone else, it needs to be taken by force. Power is inherited from earlier generations 'I am fighting royalty'. The speaker is powerless to his own anger which he describes as the 'red mist'.
Resistance by Simon Armitage	 The poem repeats the words "it's war again" several times, in reference to successive conflicts in recent history. The poem expresses how often innocent people are the victim of conflict. The lives of ordinary individuals are turned upside down by conflict. 	 The war has made individuals feel powerless as they are unable to change their situation In the poem, newspapers and the media often have the power to tell the narrative from their point of view. The poet expresses their frustration at false news being spread to other nations.
In Mrs Tilcher's Class by Carol Ann Duffy	The student feels a sense of internal conflict as they enjoy learning and seeing the world change before them, but they also want to say young and enjoy themselves.	 The teacher in the poem has the power to pass on knowledge to her students. She can tell them her own version of history as she is in a position of power.



Vocabulary Wider Research	Apply
1. Explain 2. Anthology 3. Terminology 4. Message 5. Patterns 6. Explore 7. Evidence 8. Annotate 9. Conflict 10. Opinion 11. Context 12. Structure 13. Plan 14. Perform 15. Choices 16. Differences 17. Compare 18. Empathy 19. Identify 20. Relationship 21. Summary 22. Speaker How to respond to poetry BBC Bitesize https://www.bbc.co.uk/bitesize/topics/zmbj382 Understanding War Poetry BBC Bitesize https://www.bbc.co.uk/teach/has poetry distort ed our view of world war one/z6d8382 The war in Ukraine https://www.bbc.co.uk/news/world-60525350 Shell shock and the impact of war https://www.bbc.co.uk/teach/class-clips-video/history-ks3-ks4-i-was-there-the-great-war-interviews-shell-shock/zkypy9q	 Stand outside your house and note down any noises that you can hear. Write a poem based around this. Create a charity poster that raises awareness for those in wartorn countries. Create a story-board that recreates the scenes described in the poem 'Fury'. Write an acrostic poem using one of your hobbies as the starting word. Imagine you were asked to write about your first day at secondary school. Write a poem or a rap giving advice to younger students about their first day.

Year 7 Term 1

Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 1: Continents and countries and where we live

The world is split up into different areas called Continents, Oceans and Countries. A continent is a large mass of land that lots of countries are found on. A continent is the land mass itself. These are split by the Oceans around the globe. Globally, there is 195 countries that sit within these continents. The continents may include islands within them. An example of this the where we live, the UK. We are a group of islands called the British Isles. Our country is a part of the European continent.

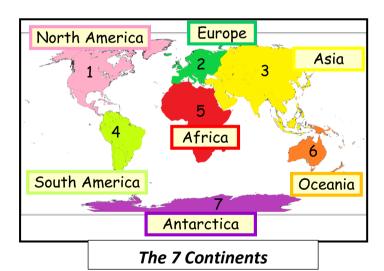
We live in a country called the United Kingdom, which is sometimes shortened to the UK. The UK is made up of 4 smaller countries to form our union of nations. These nations are called England, Scotland, Wales and Northern Ireland. Together, we are called the United Kingdom. The islands that the countries sit on are called the British Isles.

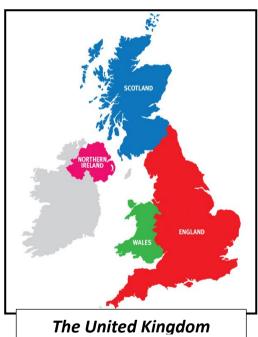
There are 7 continents in the world:

- Europe
- North America
- South America
- Antarctica
- Asia
- Oceania
- Africa

There are 5 oceans in the world:

- Atlantic
- o Pacific
- Indian
- Artic
- o Southern Ocean





Year 7 Term 1

Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 2: Longitude and Latitude

What is latitude and longitude?

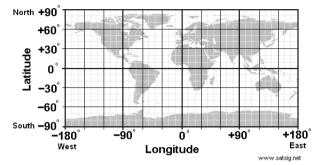
- To help locate where a place is in the world, people use imaginary lines:
- To find out how far north or south a place is, lines of latitude are used. These lines run parallel to the Equator.
- To find out how far east or west a place is, lines of longitude are used. These lines run from the top of the Farth to the bottom.

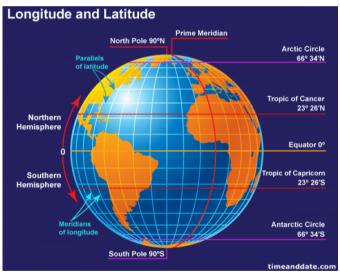
Hemispheres

- The Equator is at the centre of the lines of latitude and is at 0° latitude. Anything lying south of the Equator is in the Southern Hemisphere and is labelled °S. Anything lying north of the Equator is in the Northern Hemisphere and is labelled °N. The North Pole is 90° N and the South Pole is 90° S.
- The line labelled 0° longitude is called the Prime Meridian or the Greenwich Meridian and runs through London. Anything lying east of the Greenwich Meridian is in the Eastern Hemisphere and is labelled °E. Anything lying west of the Greenwich Meridian is in the Western Hemisphere and is labelled °W.

Time Zones

- Time zones are divided by imaginary lines called meridians which run from the North Pole to the South Pole.
- There is an imaginary line running through the UK called the Prime Meridian. It runs through a place in London called Greenwich.
- The Prime Meridian splits the world into eastern and western hemispheres.
- Time in countries to the east of the Prime Meridian is always in front of that in the UK.
- Time in countries to the west of the Prime Meridian is always behind that of the UK.





Year 7

Term 1

Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 3: Physical and Human Geography

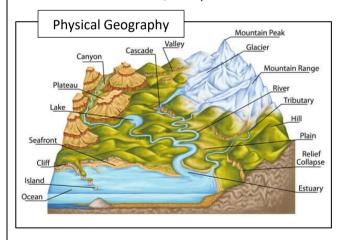
In Geography, we have two types of Geography. These are known as Human and Physical Geography. These features are the things that make places or parts of the world distinctive in their own right. Human and physical features are things that you can see all around you.

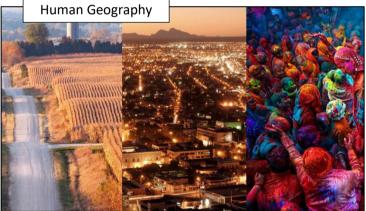
Physical features like seas, mountains and rivers are natural. They would be here even if there were no people around.

Human features like houses, roads and bridges are things that have been built by people.

Maps can show:

- Just physical features for example when people want to go walking in the mountains.
- Just human features for example when people want to find their way around the streets in towns or cities.
- Both human and physical features for example when people go walking in the countryside.
- In the mountains, a map would need to show all the physical features so that people don't get lost and they keep safe.

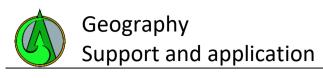




PHYSICAL: Anything the world makes

itself.

HUMAN: Anything we do to the planet.



Vocabulary	Wider Research	Apply
 Map Human Physical Landscape Infrastructure Water Oceans Countries Continents Britain Europe Asia Africa North America South America Antarctica Oceania 	 https://www.worldometers.info/geograp hy/7-continents/ https://www.kids-world-travel-guide.com/continent-facts.html https://www.youtube.com/watch?v=7yXD YvWSswl https://www.worldometers.info/geograp hy/how-many-countries-are-there-in-the-world/ Countries of the World song 	 Create an information leaflet for how to navigate the world using longitude and latitude. Design an acronym for how to remember the 7 continents. Annotate a map of the UK to detail where: The 4 nations are found The population (how many people) of each nation in the UK Mountains are found Where you live (Chatham) The most prominent river near you Create a newspaper article that explains the impacts of human geography on the world.

Norman Conquest 1066

Term 1

Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 1: Anglo Saxon England and Claimants to the English Throne in 1066

Anglo Saxon time period spans after the Romans left England in 410 and before the Norman Conquest of 1066. England was divided into separate Kingdoms known as earldoms. Each earldom had a powerful earl that was in charge.



Most people in Anglo-Saxon England lived in villages. Their homes were made of wood, wattle and daub and had thatched roofs. Most Anglo-Saxons were farmers and lived off the land. Some were skilled craftsmen who made decorative jewellery such as brooches and necklaces. Anglo-Saxons were religious and practiced Christianity.

In January 1066, King Edward the Confessor died without an heir to the throne. The Witan (a group of wise men who would advise the King) had to choose the next King of England. There were four key contenders who all had strong claims to become the next King of England.

Harold Godwinson (Earl of Wessex)

Harold Godwinson was from Wessex, in England. He was a wealthy nobleman, and it is claimed that Edward the Confessor named Godwinson as his successor on his deathbed. Harold Godwinson's sister, Edith, was married to Edward, making Harold the king's brother-in-

law. Wessex was the largest kingdom in England and his claim would have been well supported by a large proportion of the English population.

William Duke of Normandy

William was a Duke who controlled Normandy, a large region in northern France. William was a distant relative of Edward the Confessor and claimed Edward had promised him the throne in 1051. William also said that Harold Godwinson had sworn an oath that he would help William take the throne after Edward, in return for helping Godwinson when he had been stranded in Normandy in 1064.

Harald Hardrada

Harald Hardrada was a Viking and king of Norway. He was also a distant relative of King Cnut, who had previously been a king of England when the Vikings had invaded. Harald Hardrada also had the support of Tostig, who was Harold Godwinson's brother. The two brothers had fallen out. Tostig had been the ruler of Northumbria since 1055, but people rebelled against his rule. The rebels said Tostig had been a selfish and strict leader. Harold Godwinson had advised Edward the Confessor that he should support the rebels, rather than his own brother! Edward agreed, and Tostig was replaced as Earl of Northumbria. There were a number of ancestors of previous Viking invaders still living in the north of England, and they were supportive of Harald Hardrada's claim to the throne.

Edgar Atheling

Edgar was the son of Edward the Confessors' brother. But when Edward died Edgar was only 14 years old and had no experience of leading.

Who do you think the Witan chose to be King of England in 1066?

Topic 2: Before the battle

Harold Godwinson

- King Harold's soldiers were made up of housecarls and the fyrd.
- Housecarls:
- Well-trained soldiers
- Full-time soldiers
- Wore a short mail coat
- Pointed helmet to deflect blows from sword attacks
- Main weapon was the battle-axe
- Secondary weapon was a double-edged sword
- Carried a long kite shield
- The Fyrd were:
- Working men e.g. farmers who were called up to fight for the king in times of danger
- Part-time soldiers
- Un-trained
- Un-skilled
- Used iron clubs, slings, axes, sickles and haymaking forks





William, Duke of Normandy

- William had 10,000 experienced and well-trained soldiers.
- Knights:
- Well-trained from an early age to ride and fight together
- Well-paid soldiers
- Full-time soldiers
- Wore mail shirts
- Iron helmets
- Carried long kite shaped shield
- Armed with swords, throwing javelins and a heavier lance or spear
- Horseback
- Foot soldiers
- Armed with a spear and shield
- Archers, cross bowmen



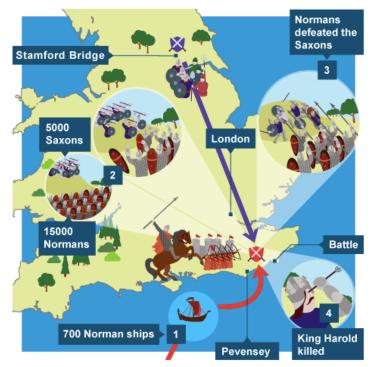
Norman Conquest 1066

Term 1

Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 3: The Battle of Hastings

- 1. William's invasion fleet cosnsited of 700 ships and a large army. Although ready since August, strong winds had prevented William and his fleet from sailing until late September.
- 2. On September 29th, William landed at Pevensay Bay. A castle was built and his army set about raiding the surrounding area.
- 3. King Harold marched quickly south, immediately after the Battle of Stamford Bridge. He left many of his foot soldiers behind and exhausted the others. Harold arrived after two weeks of constant marching.
- 4. The two sides met at Senlac Hill near Hastings. King Harold gathered his men at the top of the hill and they protected their position using a wall of shields.
- 5. The battle begin in the morning with the Norman knights firing arrows following by horseback knights charging up the hill.
- 6. The battle continued for 2 hours before a rumour suggested William had been killed. On hearing this news on the of the Norman soldiers began to flee because they thought William had been killed. William took off his helmet to show them he was still alive.
- 7. The next part of the battle was in the afternoon. Normans pretended to run away. The Saxons chased after them and broke their shield wall and control of the hill.
- 8. William used his well-equipped army to attack the housecarls and the fyrds.
- 9. William used archers to break up the Saxon shield wall.
- 10. Harold was killed. No one knows how he died but in the Bayeux Tapestry it has the words 'Harold is killed' next to a man with an arrow in his eye!



Term 1



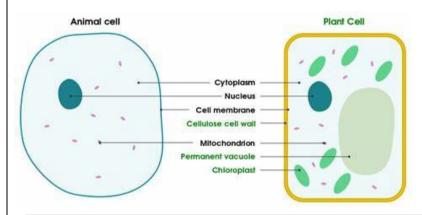
History

Norman Conquest 1066

Vocabulary	Wider Research		Apply		
 chronology Anglo-Saxo 		all the defin	tory 'dictionary' using t itions and form a sente	he key vocabulary. Find	
3) population	https://www.english-heritage.org.uk/learn/1066-and-the	Key Word	Definition	Form a sentence	
4) earldoms	norman-conquest/what-happened-battle-hastings/		,		
5) earls					
6) leader	Anglo Saxon history				
7) claimant	harman Harman				
8) heir	https://www.historic-				
9) Witan	uk.com/HistoryUK/HistoryofBritain/Invaders/			ormandy had a stronger	
10) Armour		chance of w	inning the Battle of Has	stings than Harold	
11) Threat	Claimants to the English Throne	Godwinson.			
12) Judgement	https://schoolshistory.org.uk/topics/hvitish	William had a strong	ger chance of winning t	the Battle of Hastings	
13) Capabilities		because		, ,	
14) Cavalry	history/normans/claimants-throne-1066/				
15) Archers	Develope Temperature	For example			
16) Housecarls	Bayeux Tapestry	,			
17) Fyrd	http://www.bayeuxtapestry.org.uk/	Another example	&	c 🔉 🐞	
18) Senlac Hill	ittp://www.baycaxtapestry.org.uk/		1950 Ititidah Wed fermed, selling wed on behalf	2 1992 2001 2017	
19) Pevensy Ba	The Battle of Stamford Bridge	This gave him a bett	ter state wood to trade; Shapbeed's cru selling wood to behalf Shapbeed's cru of UK abeep farmers logo trademark	ook Government price epidoraic wood dip consumer marketing tool gazennice ended reduced by 50% Instached	
20) Accuracy	_	chance because	0-0-0-	-0-0-0-0	
21) Consequen	intepsiff to the tribbelled land bitesize f Balacs/ Eqsilit 1/1/ Textision	1/2	®	★ K □	
22) Harold God	winson	3. Create a tim	reline 1967	1987 1999 2003 Ferrond sales at a first shearing project position introduced graining session held parties held	
23) Harold Hard	rada Narration of the battle (Hastings 1066)	mapping ou	t the key Wet Yethbüre, in the loan of the least of the least of the		
24) Normandy		events of th	e Battle of Hastings. (Ex	xample image)	
25) Duke of No					
26) Edgar Aeth	ing				
27) Tostig	The Bayeux Tapestry				
28) Edward the	https://www.youtube.com/watch?v=F8OPQ 28mdo				
Confessor	https://www.youtube.com/watch:v=roorQ_28mdo	4. Write a 'nev	vspaper' article narrati	ng what happened duri	
29) Bayeux Tap		the Battle of	f Hastings.		
30) 'feigned' re	reat				

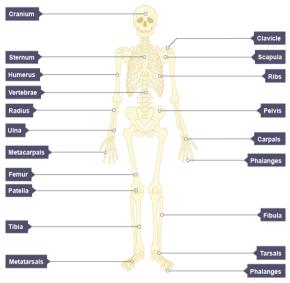
Topic 1: Movement and cells

Topic 1 - Cells



Key Terms	Definition
Cell wall	Made of cellulose, which supports the cell
Cell membrane	Controls movement of substances into and out of the cell
Cytoplasm	Jelly-like substance, where chemical reactions happen
Nucleus	Contains genetic information and controls what happens inside the cell
Vacuole	Contains a liquid called cell sap, which keeps the cell firm
Mitochondria	Where most respiration reactions happen
Chloroplast	Where photosynthesis happens

Movement – the skeleton



The Human Skeleton provides:

Support –keeps the body upright **Posture** –gives the correct shape to our body.

Protection – the bones of the skeleton protect the internal organs and reduce the risk of injury on impact.

Movement – the skeleton allows

movement of the body as a whole and its individual parts.

Production of blood cells – certain bones in the skeleton contains bone marrow which produces red blood cells, white blood cells and platelets.

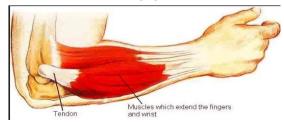
Storage of minerals - the bones store

Storage of minerals - the bones store minerals such as calcium and iron.

Muscles and joints

Muscles exist as an antagonistic pair.
They contract and relax to enable
movement. The arm contains triceps and
biceps. To raise the forearm, the bicep
contracts and the triceps relaxes.
To lower the forearm, the triceps contracts
and the bicep relaxes. When muscle
contracts, it pulls on the tendon which
pulls on the bone allowing movement.

Joints – Bones are linked together by joints which allow different parts of the skeleton to move.



D

Your teacher will tell you which topic you should revise. Read and learn all the information in the topic, ready for a Quiz in lesson.

Topic 2: Speed and Forces

Gravity is a force that attracts objects towards each other. Gravity only becomes noticeable when there is a really massive object like a moon, planet, or star.

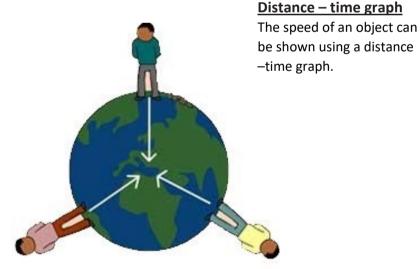
Gravity is what pulls us towards the ground.

Forces at a distance

- A field is a region where an object experiences a force. In a gravitational field, a mass experiences a force.
- Weight is a force and depends on the gravitational field strength.
- Mass is the amount of matter something is made up of.

Weight (N) = Mass (kg) x gravitational field strength (N/kg)

The gravitational force pulls in the direction towards the centre of any object. So we are pulled towards the centre of the Earth.



Speed

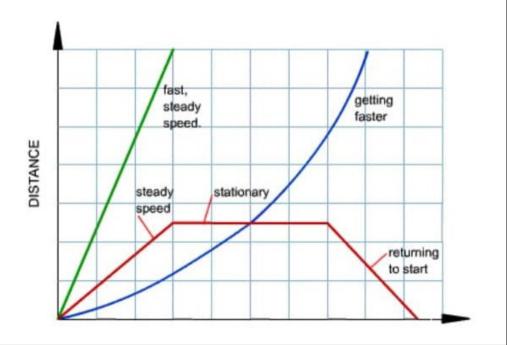
Speed is a measure of how fast something or somebody is moving.

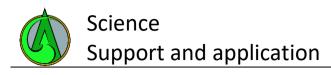
How we calculate speed?

Speed = Distance / time

- Distance = m (metres);
- Time = s (seconds);

Speed = m/s (metres per second)





Vocabulary	Wider Research	Apply	
Multicellular organism	Provide definitions for each key words in	Sentence starters:	
Cell,	the vocabulary section		
Tissue,		1. What is the difference between mass and weight?	
Organ,			
Organ System	Additional information on speed can be	2. Australia is known as "down-under". Why are people in Australia not	
Bone,	found here:	upside down?	
Skeleton,		upside down:	
Support,	. What is speed? - BBC Bitesize	2. The less contains according to the containers and automorph	
Protect,		3. The leg contains muscles called flexors (hamstrings) and extensors	
Bone marrow,		(quadriceps). Describe how these muscles to allow leg movement.	
Biomechanics,	Gravitational forces - Astronomy and space		
Joint,	science - KS3 Physics Revision - BBC Bitesize	4. Which organs are at risk of damage in a person without ribs? Explain why	
Cartilage,			
Ligament,	What are cells? - BBC Bitesize	5. Speed = Distance divided by time	
Newtons,		What are the formulas for finding:	
Tendon,		a) Distance	
Antagonistic muscle		b) Time	
Weight	The skeleton - Skeletal and muscular systems	c) Speed	
Mass	- KS3 Biology Revision - BBC Bitesize	Challenge	
gravitational field		<u>Challenge:</u>	
strength		1. Draw a distance –time graph, showing the journey made when:	
balanced		1. Draw a distance —time graph, showing the journey made when.	
unbalanced		A cyclist on a training ride records the distance she travels away from home. She cycles at	
equilibrium		a steady speed from her house (start) to a cycling centre. She stops for a few minutes and	
		then cycles back home.	
		then cycles back notife.	
		Note: You do not need to include any numbers for distance or time	



Topic 1: Averages and Data

Pie Charts: In a pie chart, the circle (or pie) represents the whole of the data. Each category of data is represented by a sector of the circle (or slice of the pie). The angle of each sector is The pie chart shows how pupil in class 8C travelled to school one morning.

proportional to the frequency of the category it represents.

Average – is a typical value of a set of data, which can be used to represent the whole data set: mean, median and mode are all types of average.

Mean – is found by adding all the values and dividing the sum by the number of values in the set; for example, the mean of 5, 6, 14, 15 and 45 is $(5 + 6 + 14 + 15 + 45) \div 5 = 17$.

Median-Is the middle value in set of data that is arranged in order: for example, write the data set 4, 2, 6, 2, 2, 3, 7 in order, to give 2, 2, 3, 4, 6, 7, then the median is the middle value, which is 3. If you are left with two values in the middle, the median is the mean of the two values; for example, 2, 3, 6, 8, 8, 9 has a median of $(6 + 8) \div 2 = 7$.

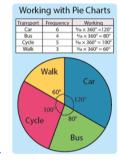
Mode/Modal - is the value that occurs the most often. The mode is the only average that you can use for nonnumerical data, such as favourite colours or football teams. Sometimes there may be no mode, because all the values are different. 1, 2, 3, 4, 5, 6, has no mode. 1, 2, 2, 4, 5, 3, 2 has a mode of 2.

Range – to find the range you find the difference between the largest and smallest values; for example, the range of 5, 3, 4, 2, 8, 3, 4 is 6, because 8 - 2 = 6.

5 pupils in class 8C travelled by car Car Walk



b) Work out how many pupils were included in the survey



Statistical diagrams:

A bar chart is a display of data using bars of different heights. Shown on the right are some examples of statistical diagrams.

Frequency Tables:

When a lot of data needs to be sorted, one of the most efficient ways is to use a frequency table. See the example on the right.

A Frequency diagram, often called a line chart or frequency polygon shows the frequency for different groups.

The chart below shows the results from the frequency table.

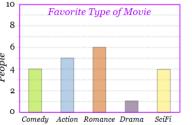
This pictogram shows the number of pizzas eaten by four friends in the past month:

Alan	
Bob	
Chris	0006
Dave	
= 4 pizzas	

4	5	6	1	4	
10					
Favorite Type of Movie					
8					
_+-					

Table: Favorite Type of Movie

Action Romance Drama





Topic 2: Using Numbers

Four Operators

The four operations of mathematics are mathematical functions which take input values (numbers) and convert them into output values (another number). They are: addition, subtraction, multiplication, and division.

Negative Numbers

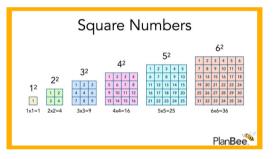
Numbers don't just stop at zero. When you count backwards from zero, you go into negative numbers.

Positive numbers are more than zero: 1, 2, 3, 4, 5, etc.

Negative numbers are less than zero: -1, -2, -3, -4, -5, etc.

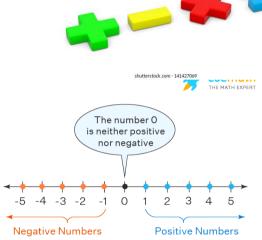
A number line can be used to order negative and positive numbers.

Zero, 0, is neither positive nor negative.



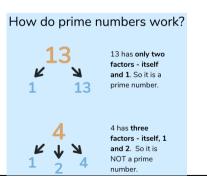
Square Numbers

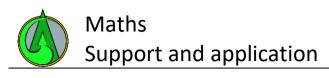
A square number is a number that has been multiplied by itself. For example, 36 is a square number because it is made up of six lots of 6: 6 x 6 = 36. To write the mathematical formula for this, you would add a small 2 to the top right of the number, for example: 6^2 (six squared).



Primes

A prime number is a whole number greater than 1 with only two factors – themselves and 1. A prime number cannot be divided by any other positive integers without leaving a remainder, decimal or fraction. An example of a prime number is 13. Its only divisors are 1 and 13. Dividing a prime number by another natural number results in numbers leftover e.g. $13 \div 6 = 2$ remainder 1. 15 is not an example of a prime number because it can be divided by 5 and 3 as well as by itself and 1.





Vocabulary	Wider Research	Apply
Average	Topic 1:	Topic 1:
Data		
Mean	https://corbettmaths.com/wp-	https://corbettmaths.com/wp-content/uploads/2013/02/averages-and-
Median	content/uploads/2022/11/Averages-and-Range-1.pdf	range-pdf2.pdf
Mode	https://corbettmaths.com/wp-	https://corbettmaths.com/wp-content/uploads/2013/02/mean-from-a-
Range	content/uploads/2013/02/averages-and-range-	frequency-table-pdf3.pdf
Frequency	pdf2.pdf	https://www.mathsgenie.co.uk/averages.html
Addition	https://www.mathsgenie.co.uk/bar-charts.html	
Subtraction		
Multiplication		Topic 2:
Division	Topic 2:	
Square Number		https://corbettmaths.com/2019/09/02/order-of-operations-practice-
Prime Number	https://corbettmaths.com/wp-	questions/
Factor	content/uploads/2020/05/Negatives-addition-and-	https://corbettmaths.com/wp-content/uploads/2020/05/Negatives-
Negative	subtraction.pdf	addition-and-subtraction.pdf
	https://www.mathsgenie.co.uk/negativenumbers.htm	https://corbettmaths.com/wp-content/uploads/2013/02/negatives-
		multiplication-and-division.pdf
		https://corbettmaths.com/wp-content/uploads/2018/09/Squaring-
		Numbers-pdf.pdf
		https://corbettmaths.com/wp-content/uploads/2018/09/Prime-Numbers-
		pdf.pdf