Sheffield Park Academy
The best in everyone™
Part of United Learning

Knowledge Organiser

Term 1

Name: .....

Tutor Group: .....

Tutor & Room: .....

AMBITION • KNOWLEDGE • DETERMINATION

CONTENTS

How do I complete Knowledge Organiser homeworks?

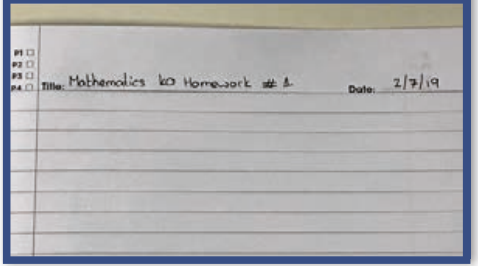
You will be set a MINIMUM of 2 Knowledge Organiser homeworks in every subject each half term

STEP 1

Identify what words/ definitions/facts you have been asked to learn.

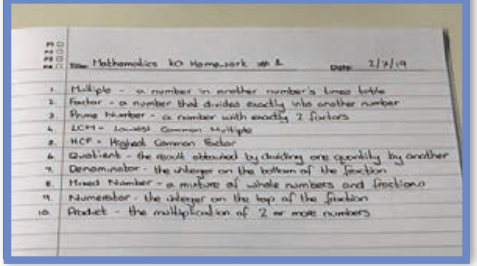
STEP 2

Write today's date and the title from your Knowledge Organiser.



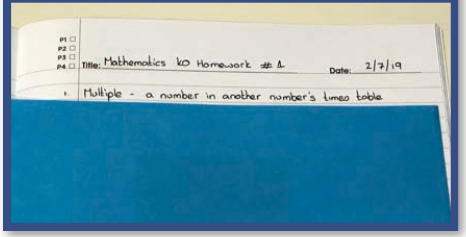
STEP 3

Write out the keywords/definitions/facts you have been set in FULL.



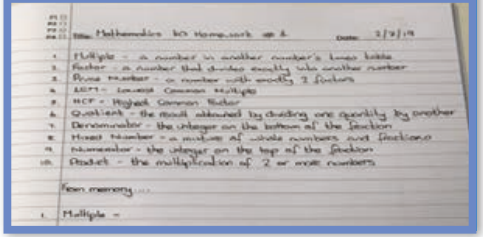
STEP 4

Cover the definitions in your SELF-QUIZZING BOOK, apart from the first. **Read it, Cover it, Say it** in your head, check it… REPEAT until confident.



STEP 5

Cover up ALL the definitions/facts and write them out from memory in your SELF-QUIZZING BOOK.



STEP 6

Check your answers and correct where required. Repeat Steps 4 to 6 until you are confident.

You will be **tested** on the words/definitions/ facts as a starter activity in your lesson on the day that the homework is due.

This will be completed in your normal exercise book and you will mark it in class.

Your Knowledge Organiser and Self-Quizzing Book

Knowledge Organisers

Knowledge Organisers contain critical, fundamental knowledge that you MUST know in order to be successful in Year 7 and subsequent years.

They will help you recap, revisit and revise what you have learnt in lessons in order to move the knowledge within from your short-term memory to long-term memory.

Self-Quizzing Book

This is the book that all Knowledge Organiser homework is to be completed in.

You must follow the simple rules as to how they are to be used.

You **must** bring your Knowledge Organiser and Self-Quizzing Book to **every** lesson and place it on your desk at the beginning of each lesson.

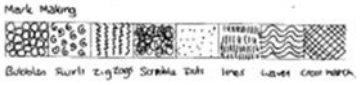
You **must** keep all of your Knowledge Organisers and Self Quizzing Books because the fundamental knowledge required in Year 7 will also be required in Year 8.

Knowledge Organisers are **NOT** a replacement for revision guides but they include the fundamental knowledge that ALL students in Year 7 require.

Y7 Art and Design – Formal Elements

	Key Words	
1	**Line**	The path made by a moving point.
2	**Tone**	The lightness or darkness of something.
3	**Colour**	There are 2 types including primary and secondary.
4	**Primary Colours**	Blue, Yellow and Red. They cannot be made, but are used to make all other colours.
5	**Secondary Colours**	Green, Orange and purple. These can be made by mixing two primary colours.
6	**Texture**	The surface quality of something, the way something feels or looks like it feels.
7	**Pattern**	A design that is created by repeating lines, shapes, tones or colours.
8	**Composition**	The arrangement or layout of parts of a picture/piece of art.

	Techniques	
9	**Observational drawing.**	Drawing or painting from life.
10	**Continuous Line Drawing**	A drawing that is made by keeping the pen or pencil in contact with the paper for the whole task.
11	**Directional Shading**	Shading that follows the contours of the shape to make it look 3D.
12	**Mark Making**	Is a term used for the creation of different patterns, lines, textures and shapes.
13	**Tracing**	To make a copy of a drawing/image by going over its lines on a piece of transparent paper.



Year 7
Computer Science Term 1 Knowledge Organiser

Internal Components		
1	**Hardware**	The components kept inside a computer.
2	**Peripheral**	A device which can add extra functionality to a computer system. Peripherals can either input or output data from the computer.
3	**Input**	A peripheral device which takes data from the real world and enters it into a computer systems.
4	**Output**	A peripheral device which takes data from a computer system and presents it into the real world
5	**Storage**	Devices that store virtually all the data and applications on a computer.
6	**Motherboard**	Connects all components in the computer together.
7	**Processor (CPU)**	Performs any calculation and processes instructions given to it.
8	**RAM**	Short term storage which stores instructions for the CPU to process.
9	**Hard Drive**	Stores information in long term memory. Contains magnetic disks inside to store data on.
10	**Head sync**	Used to cool down the components and prevent them from overheating.
11	**Power Supply Unit (PSU)**	Inputs power to the system.
12	**PCI Slot**	Allows the user to upgrade their PC and add extra ports.
13	**Assistive Technology**	Any object or system that increases or maintains the capabilities of people with disabilities.

Social Media Dangers		
1	Social Media	A website, computer program or application (app) that allows people to communicate and share information on the internet using a computer or smart device
2	Cyberbullying	People being nasty/ bullying you online
3	Cyber-predators	Adult who stalk/ befriends you and takes advantage
4	Grooming	People being nice, offering gifts and affection in return for 'favours' of some kind
5	Posting private information	Giving out personal information to others online who you down know
6	Phishing	Using professional looking emails to get access to private information, usernames/ passwords
7	Falling for scams	Falling for the chance to win expensive items such as iPads and smart phone
8	Downloading Malware	When you stream movies from illegal websites you may install a virus

Y7 Exploring Drama- Term 1

Areas for Assessment	
1. Creating	The ability to work within a group to create and develop performance work.
2. Performing	The ability to present a character using physical and vocal skills.
3. Evaluating	The ability to discuss the qualities of a performance using dramatic language.
Explorative Strategies	
4. Still image	Performers use their bodies to create a frozen picture (like a photo) which shows emotions, relationships and narrative.
5. Thought tracking	Speaking the inner thoughts of your character aloud to understand their feelings.
6. Hot seating	Questioning a character to discover more information about their past experiences and feelings.
Performance Techniques	
7. Facial expressions	What emotion are they feeling? Where are they looking?
8. Body language	Open or closed? Does it help the audience understand their feelings and social position?
9. Gesture	What are they doing with their hands? Can it help the audience understand what is going on?
10. Proxemics (space)	Where do the performers stand in the space? Does the distance between characters tell us anything about their relationships?
11. Audience awareness	Are the performers positioned in places where the audience can see them fully?

Year 7 -Knowledge Organiser

1	Hazard	A **hazard** is anything that can cause harm to someone.
2	Food Hygiene	**Food Hygiene** is the practice of storing, preparing and handling food safely to prevent spread of bacteria and food poisoning.
2	Personal hygiene	**Personal hygiene** is the practice of keeping yourself clean to prevent the spread of disease and illness.
3	Bacteria	Bacteria are microscopic organisms not visible with the naked eye. **Bacteria** are everywhere, both inside and outside of your body.
4	Cross contamination	**Cross-contamination** is the physical movement or transfer of harmful bacteria from one person, object or place to another.
5	Bridge Hold	**Bridge hold** is a technique where the thumb and index finger are placed either side of the food item to make a bridge shape. The knife goes under the bridge.
6	Claw grip	The **claw grip** uses your fingertips to grip the food in a **claw** shape keeping the knife away from your fingertips.
7	Enzymic browning	**Enzymic browning** is a reaction that takes place in some foods, mostly **fruit** and vegetables, when exposed to oxygen the food turns **brown.**
8	Rubbing in method	'**Rubbing** in' is a **technique** where flour is **rubbed** into a fat. It is used to make shortcrust pastry, crumbles and scones.

Bridge hold

Claw grip

A.	General opinions	
1	J'adore	I love
2	J'aime	I like
3	Je n'aime pas	I don't like
4	Je déteste	I hate
5	Je préfère	I prefer
B.	Connectives	
1	Et	And
2	Aussi	Also
3	Mais	But
4	Ou	Or
5	Cependant	However
C.	Description	
1	Je suis	I am
2	Il est	He is
3	Elle est	She is
4	Grand(e)	Tall
5	Petit(e)	Short
6	Mince	Thin
7	Gros(sse)	fat
8	De taille moyenne	Medium sized

D.	Description	
	J'ai	I have
	Je n'ai pas de	I haven't got
	Les yeux bleus	Blue eyes
	Les yeux verts	Green eyes
	Les yeux bruns	Brown eyes
	Les cheveux longs	Long hair
	Les cheveux courts	Short hair
	Les cheveux roux	Red hair
	Les cheveux noirs	Black hair
	Les cheveux bouclés	Wavy hair
	Une barbe	A beard
	Une moustache	A moustache
E.	Family	
	Ma famille	Ma family
	Mon père	My dad
	Ma mère	My mum
	Mon grand père	My grandad
	Ma grand mère	My grandma
	Mon frère	My brother
	Ma soeur	My sister
	Mon oncle	My uncle
	Ma tante	My auntie
	Un frère	1 brother

F.	Adjectives	
1	Cool	Cool
2	Super	Super
3	Nul	Rubbish
4	Sympa	Nice
5	Méchant	Mean
6	Amusant	Fun
7	Intelligent	Clever
8	Bavard	Talkative
9	Agacant	Annoying
10	Gentil	Kind
11	Sportif	Sporty
12	Il est	He is
13	Elle est	She is
14	Ils sont	They are
G.	Intensifiers	
1	Vraiment	Really
2	Très	Very
3	Assez	Quite
4	Un peu	A bit
H.	Time phrases	
1	De temps en temps	From time to time
2	Normalement	Normally
3	Le weekend	At the weekend

I.	Negative adjectives	
1	pénible	annoying
2	barbant	boring
3	désagréable	unpleasant
4	énervant	annoying
5	agaçant	stressful
6	ridicule	ridiculous
7	dangereux	dangerous
8	déprimant	depressing
9	impossible	impossible
10	bête	silly
11	inquiétant	worrying
12	nul	rubbish
13	inutile	useless
14	casse-pieds	a pain
J.	Activities	
1	Je joue au foot	I play football
2	On mange au restaurant	We eat at the restaurant
3	Aller au cinema	To go to the cinema
4	Faire du shopping	To go shopping
5	Faire de la natation	To do swimming
6	Jouer au rugby	To play rugby
7	Jouer au foot	To play football
8	Regarder la télé	To watch TV

1.	*Continents of the world*
Continent	A large expanse of land made up of countries. For example, we live in the country England which is in the continent Europe. Each country is part of a continent. There are 7 globally: • Africa • Antarctica • Europe • North America • South America • Asia • Australasia/Oceania.
Ocean	A large area of water. There are 5 major oceans globally: Arctic Ocean, Southern Ocean, Pacific Ocean, Atlantic Ocean, Indian Ocean.
Latitude	Latitude is how far north or south a place is from the equator **(0°).**
Longitude	Longitude is how far east or west a place is from the Prime Meridian **(0°).**
Direction	Which way things are going, or located. Usually shown using a compass.
Equator	The line that divides the northern and southern hemispheres.

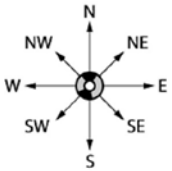
2.	*Countries and capital cities in the UK*
Country	Nation of people with its own government occupying a particular area. Sometimes they will have their own cultures and traditions. Countries can vary enormously in size.
County	These are found within a country. They are divisions of a country e.g. South Yorkshire is the county Sheffield is located in.
Human Geography	Human geography is the study of people (populations), cities and countries.
Physical Geography	Physical geography is the study of natural geography e.g. rivers, coasts, tectonic processes.
United Kingdom	England, Wales, Scotland and Northern Ireland.
Great Britain	England, Scotland and Wales.
British Isles	England, Wales, Scotland, Northern Ireland and the Republic of Ireland.

Year 7: Topic 1 - Geographical Skills

3.	*Grid references*
Map symbol	Something which replaces a landmark, location or building type. Often map symbols are shown on an OS map key.
Grid references	These are used to find a specific location on a map. They can be four figure or six figure.
Key	The explanation of symbols used on a map. Often similar features are grouped together.

4.	*Contours*
Relief	The height and shape of the land.
Contour lines.	Contour lines are lines on a map which join areas of the same height. These are shown using meters above sea level. They are an orange colour on an OS map.
Spot heights	Spot heights give the exact height of a point on a map. They are shown as a dot and each dot has a number next to it. This is height in metres (m).
Triangular Pillars	These are shown as blue triangles with a dot in the middle. They are what surveyors use to find the exact height of a specific place. This is height in metres (m).

5.	*Scale*
Scale	The size of objects on a map compared to their size in the real world. A scale line is often used on a map.
Distance	How far something is. Shown in either meters or kilometres.



Year: 7 – Knowledge Organiser
Topic: World Views

380
Christianity was made the official religion of the Roman Empire

537
The Hagia Sophia was built in Constantinople

762
Caliph Al-Mansur ordered the city of Baghdad to be built as the capital of the Islamic Empire

9th century
A monk, Arinisdus, stole the body of Saint Foy from Agen to take to the monastery at Conques

1042
Empress Zoe's nephew tried to seize her throne

324
Emperor Constantine made Constantinople the new capital of the Roman Empire

5th century
The western Roman Empire collapsed

632
The Prophet Muhammad died but his Muslim followers continued to spread Islam through Arabia and beyond

801
Dado the Hermit founded a monastery at Conques, in France

983
Guibert had his eyes miraculously restored by Saint Foy

1043
Russian ships attacked the city of Constantinople

Key Assessment
Islamic Contributions

Areas of our study

1. How do Historians Measure Time?
2. Constantinople in 1000 AD
3. Baghdad and the Muslim World
4. Baghdad's House of Wisdom
5. Knowledge in Muslim World
6. Science an d Medicine in the Muslim World
7. Significance of Baghdad

How do I use my knowledge organiser?

Have you learnt the key dates of this unit?

Can you put the dates into chronological order?

Have you mastered the keywords?

Can you spell them?

Can you define them?

Have you understood the key concept?

Can you explain what an event/individual/place in history reveals about a bigger picture or bigger idea?

Key Words – Individuals – World Views

1.	**The Pope**	Head of the Catholic Church
2.	**Abbasid Dynasty**	Line of rulers in Baghdad from 750-1258
3.	**Astrolabe**	An navigation instrument that uses the stars
4.	**Astrology**	Studying stars and planets to predict influence
5.	**Astronomy**	Study of space, stars and the planets
6.	**Baghdad**	Capital of the Islamic world c.1000 AD (in modern Iraq)
7.	**Byzantine Empire**	Eastern Roman Empire (Capital at Byzantium/Constantinople)
8.	**Caliph**	Religious and political leader of the Islamic Empire
9.	**Geometry**	Mathematics that deals with points, lines, angles and shapes
10.	**House of Wisdom**	A meeting place in Baghdad for scholars to discuss knowledge
11.	**Monk**	A religious person that has devoted themselves to god and lives in a monastery
12.	**Mosque**	A Muslim place of worship
13.	**Pope**	Head of the Roman Catholic Church
14.	**Relic**	The remains of a saint's body or belongings
15.	**Silk Road**	The land route used for trade between China, the Middle East, Europe and North Africa

Year: 7 – Knowledge Organiser
Topic: Norman Conquest and Control

Areas of our study

Anglo Saxon England
8. Society
9. Government
10. Economy
11. Royal Family

Norman Conquest
1. Claimants
2. Harold Godwinson
3. Battle of Fulford Gate
4. Battle of Stamford Bridge
5. Battle of Hastings

Norman Control
1. William's problems
2. Harrying the North
3. Feudalism
4. Castles
5. The Domesday Book
6. The Church
7. Everyday life
8. Change & Continuity

Key Words & Key people - Conquest

1	**Anglo Saxons**	The people who lived in and ruled England before 1066
2	**Edward the Confessor**	An Anglo-Saxon king of England. He died in January 1066. This caused a crisis– who would be the new king?
3	**Harold Godwinson**	The Anglo Saxon who became king of England in January 1066
4	**Vikings**	Seafaring people from Scandinavia who wanted to rule England
5	**Harald Hardrada**	A fearsome Viking who wanted to be king of England
6	**Normans**	Former Vikings who settled in Normandy, France, and built an Empire
7	**William of Normandy**	The Duke of Normandy who thought he should be King of England
8	**William the Conqueror**	The name we give to William of Normandy after he defeated the Anglo-Saxons and became king of England
9	**Claimant**	One of three challengers to the throne of England in 1066
10	**Monarch**	The King or Queen of a country
11	**Succession**	A new monarch taking over from the last one
12	**Oath**	A promise, believed to be witnessed by God
13	**The Witan**	Anglo-Saxon noblemen who first chose their king, then advised him
14	**Fryd**	Anglo-Saxon part-time soldiers, came from villages when needed
15	**Huscarls**	Trained professional Anglo-Saxon soldiers
16	**Shield Wall**	A long barrier of shields, held close together as a tactic in battle
17	**Archer**	A soldier with a bow and arrow
18	**Cavalry**	Soldiers who fought on horseback
19	**Tactic**	A planned strategy to use in battle
20	**Bayeux Tapestry**	A 70-metre-long embroidered cloth, tells the story of the Norman Conquest

Figure 1: Conisbrough Castle: A Norman motte and bailey castle that you can visit. It is 12 miles away.

Key dates – Norman Conquest Control

1	January 1066	Edward the Confessor Dies
2	September 1066	The Battle of Stamford Bridge
3	October 1066	The Battle of Hastings
4	1069	The Harrying of the North
5	1086	The Domesday Book is published

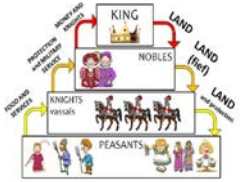


Figure 2: The Feudal System – shows who had power and responsibilities after 1066 in Norman England.

Key Words – Norman Control

1	**Harrying**	To repeatedly attack someone or something
2	**Revolt**	To fight against a ruler
3	**Fortification**	Building to defend a place from attack
4	**Motte and Bailey Castle**	A simple castle with a man-made hill (the motte) surrounded by a stone or wooden-walled fortification (the bailey) – *see Figure 1*
5	**The Feudal System**	The structure of medieval society – *see Figure 2*
6	**Survey**	To examine or measure something
7	**The Domesday Book**	The important book ordered by William that records a great survey of possessions in every village in England.

Key Assessment questions

- Why did William win the Battle of Hastings?
- How did William take control of England?
- How far did England change under the Normans?

How do I use my knowledge organiser?

Have you learnt the key dates of this unit?

Can you put the dates into chronological order?

Have you mastered the keywords?

Can you spell them? Can you define them?

Can I write in paragraphs?

The **TIPTOP** rule

You move onto a new paragraph when you change **t**ime, **p**lace, **t**opic or **p**erson.

1. I always start an essay with an introduction which addresses the question.
2. I finish an essay with a conclusion to summarise the main points of my argument and to address the question again.
3. I use connectives in each paragraph to link my ideas and to put them in a logical order.

Furthermore	But	Meanwhile
Whereas	Since	Nonetheless
Nevertheless	Yet	However
Alternatively	Therefore	Although
Consequently	Besides	Moreover

Have I used the correct grammar?

I am aware that I must use language that is appropriate to my reader.

◆ **No slang** that lesson was ~~bangin'~~
◆ **No informal language** I'm ~~gonna~~ do my homework now

◆**Other things to consider:**

✓ **I am clear about the purpose of this piece of writing**
✓ **I know who my audience is**
✓ **I will use a suitable layout and text type**

I am proud of my work because...

- I have written clearly so that my reader can understand my writing easily.
- I have checked my **spelling** and corrected any errors.
- I have used full sentences with a subject and a verb.
- I have used correct **punctuation** and **grammar.**
- I have paragraphed my work using **TIPTOP.**
- My writing is suitable for the person I am writing for

Can I spell familiar words accurately?

Common contractions

We must use an apostrophe to replace any letter(s) we have left out.

11 o'clock	I'd	We'd
Aren't	I'll	We'll
Can't	I'm	We're
Couldn't	Isn't	Weren't
Didn't	It'd	What's
Doesn't	It'll	When's
Don't	It's	Where'd
Hadn't	Mightn't	Where's
Hasn't	Mustn't	Who'd
Haven't	She'd	Who'll
He'd	She'll	Who's
He'll	She's	Why'd
He's	Shouldn't	Why'll
How'd	They'd	Why's
How's	They'll	

Can I use different sentence types?

Simple sentences: contains a subject and a verb and can contain an object
- Sarah likes to read in the library.
- Tom enjoys reading at home.

Compound sentences: joins two simple sentences using the connectives: for, and, nor, but, or, yet, so.
- Sarah likes to read in the library but Tom prefers to read at home.

Complex sentences: A complex sentence contains a conjunction such as because, since, after, although, or when .
- Because Robert felt tired, he only studied for an hour.
- Although the rain had stopped, the pitch was still water-logged.
- Paul enjoys Music, however, he is more proficient in Art.

Homophones

I have checked that I have not mixed up my homophones.

affect/effect	one/won
bare/bear	passed/past
brake/break	peace/piece
buy/by	practice (n)/practise (v)
grate/great	read/red
hair/hare	sea/see
hole/whole	sight/site
hour/our	to/too/two
knight/night	wait/weight
know/no	weak/week
meat/meet	wear/where
	witch/which

Basics:

- ❑ Every sentence must start with a capital letter.
- ❑ Every sentence must finish with some form of punctuation: .?!
- ❑ Proper nouns need capital letters. These are **unique** people, places or things e.g. there are many cities so 'city' doesn't take a capital letter. However there is only one London, therefore it takes a capital letter.
- ❑ When writing titles of works such as books, films or plays:
  - ▪ Capitalise the first word
  - ▪ Capitalise any main/important words
  - ▪ Don't capitalise minor words such as 'and', 'of' or 'the' e.g. The Sound of Music, The Wizard of Oz, Harry Potter and the Goblet of Fire
- ❑ When writing speech:

✓Go to a new line when a different person speaks
e.g. "Good morning" said the Headteacher.
"It's the afternoon!" replied the student.
✓Each person's speech is marked with speech marks e.g. "Walk on the left" said Mr Mathews.

Can I spell accurately?

1. Sound out the word
2. Think about how it looks
3. Think about a similar word
4. Is there a memory sentence for this word? (e.g. big elephants cannot always use small exits)
5. Find the word in a list –
   - Key words list
   - Frequently used words list
   - Your own word bank
7. Ask a friend or teacher
8. To learn it: look, cover, write , check
9. Once you've solved it, add the correct spelling to your own word bank.

Can I use punctuation?

The Apostrophe

I always aim to use apostrophes correctly.

There are two main reasons why we use apostrophes: for possession and to replace a letter or letters

Note: Apostrophes are NEVER used to denote plurals

Full stop	.	indicates that a sentence has finished
Comma	,	indicates a slight pause in a sentence, separates clauses in a complex sentence and items in a list
Question mark	?	goes at the end of a question
Exclamation mark	!	goes at the end of a dramatic sentence to show surprise or shock
Apostrophe	'	shows that letter(s) have been left out or indicates possession
Speech marks	""	indicate direct speech, the exact words spoken or being quoted
Colon	:	introduces a list, a statement or a quote in a sentence
Semicolon	;	separates two sentences that are related and of equal importance
Dash / hyphen	-	separates extra information from the main clause by holding words apart
Brackets	( )	can be used like dashes, they separate off extra information from the main clause
Ellipsis	...	to show a passage of time, to hook the reader in and create suspense

Apostrophe for Possession

(To show that something belongs to another)

If a single thing/person owns anything, add an apostrophe + 's'.
- •The dog's bone
- •The boy's homework
- •Jones's bakery
- •Yesterday's lesson

However, if it is plural (more than one), an apostrophe comes after the 's'.
- •The dogs' bones
- •The boys' homework
- •Joneses' bakeries (lots of Jones families)
- •Many websites' content is educational

There/ their/ they're

Note: special care must be taken over the use of **there**, **their** and **they're** as they sound the same but are used quite differently:

- ❖**There** shows position *Your seat is over there*
- ❖**Their shows that 'they' own something** Their blazers are navy blue
- ❖**They're** is short for **they are** as in *They're revising every day*

Its

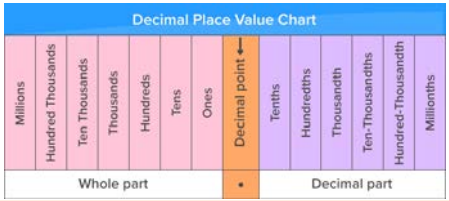
Note: its, which shows that something owns something (like our, his etc), does not take an apostrophe: *the dog ate its bone and we ate our dinner*

Your/ you're

Note: special care must be taken over the use of **your** and **you're** as they sound the same but are used quite differently:

- ❖**Your** is possessive as in *this is your pen*
- ❖**You're** is short for you are as in *you're coming over to my house*

Place Value

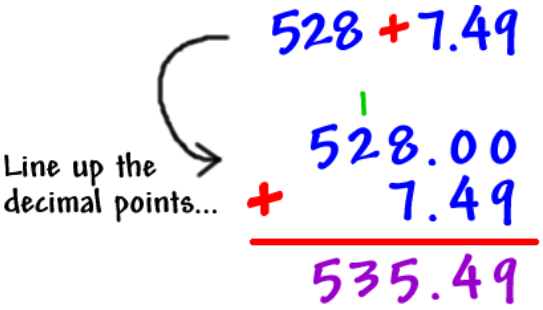


1. **Ascending** = ordered from lowest to highest
2. **Descending** = ordered from highest to lowest

Indices

Key Word	Definition & Example
3. Square Numbers	Formed by multiplying an integer by itself E.g. $3^2 = 3\times3$ $= 9$ $1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144$ …
4. Cube Numbers	Formed by multiplying an integer by itself 3 times E.g. $5^3 = 5\times5\times5$ $= 125$ $1, 8, 27, 64, 125, 216, 343, 512, 729, 1000$ …
5. Square Root	The inverse of squaring E.g. $\sqrt{9} = 3$
6. Cube Root	The inverse of cubing E.g. $\sqrt[3]{125} = 5$

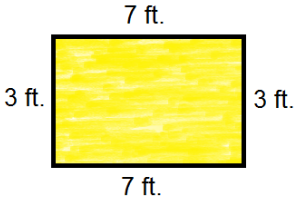
Addition & Subtraction



Just turn that whole number into a decimal!

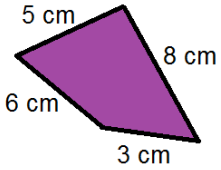
Perimeter

7. **Perimeter** = the distance around a 2D shape.



7 + 3 + 7 + 3 = 20

The perimeter is 20 feet.



5 + 8 + 3 + 6 = 22

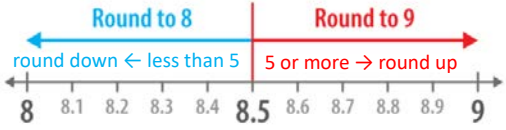
The perimeter is 22 cm.

Rounding and Estimation

8. Integer = a whole number

9. Round = Rounding means making a number simpler but keeping its value close to what it was.

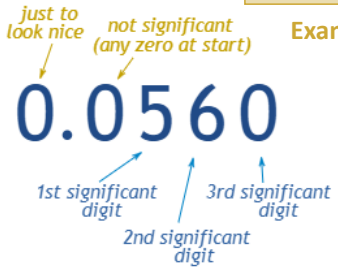
Example: Round 8.6 to the nearest integer



8.6 rounds to **9**

Significant Figures

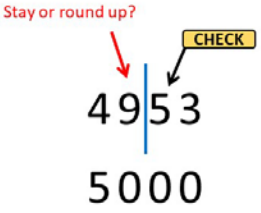
The first significant figure is the **first non-zero digit.**



10. Evaluate = Calculate the answer.

11. Estimate = round each number to 1 significant figure and then evaluate.

Example: Round 4953 to 2 significant figures



Negative Numbers

Addition & Subtraction

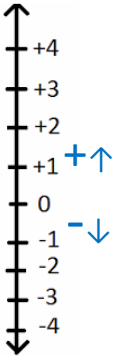
Find the Sum = add them together

Start
The first number (including its sign)

Direction
+↑ -↓

Distance
How many you move up or down the number line

$2+3=5$ $2 \uparrow 3$	$-2-3=-5$ $-2 \downarrow 3$	$2--3=5$ $2 \uparrow 3$
$2-3=-1$ $2 \downarrow 3$	$-2+3=1$ $-2 \uparrow 3$	$-2--3=1$ $-2 \uparrow 3$

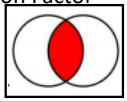
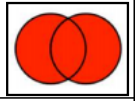


Multiplication & Division

The same rules apply for division

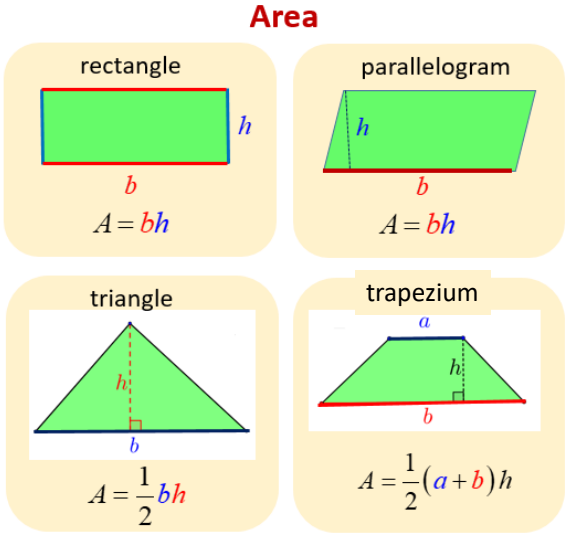
Expression	Product	Example
positive × positive	positive	$2 \times 3 = 6$
negative × negative	positive	$-2 \times (-3) = 6$
negative × positive	negative	$-2 \times 3 = -6$
positive × negative	negative	$2 \times (-3) = -6$

Factors, Multiples & Primes

Key Word	Definition & Example
12. Factor	An integer that divides into another integer exactly. E.g. *List the factors of* 28 1 , 28 , 2 , 14 , 4 , 7
13. Multiple	A number in that numbers times tables. E.g. *List the first ten multiple's of* 7 7 , 14 , 21 , 28 , 35 , 42 , 49 , 56 , 63 , 70
14. Highest Common Factor (HCF) 	The largest number that is a factor of at least two numbers. E.g. *Find the HCF of* 28 *and* 12 *Factors of* 28: 1 , 28 , 2 , 14 , 4 , 7 *Factors of* 12: 1 , 12 , 2 , 6 , 3 , 4 $HCF = 4$
15. Lowest Common Multiple (LCM) 	The smallest number that is a multiple of at least two numbers. E.g. *Find the LCM of* 8 *and* 12 *Multiples of* 8: 8 , 16 , 24 … *Multiples of* 12: 12 , 24 … $LCM = 24$
16. Prime	A number with EXACTLY 2 factors. 2 , 3 , 5 , 7 , 11 , 13 , 17 , 19 , 23 , 29 , 31 , 37 …
17. Product	To find the product means to multiply. E.g. The product of 6 and 7 is 42.

Area

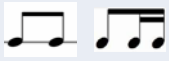
18. Area = the space inside a 2D shape.



The '**b**' represents **base** and the '**h**' represents **perpendicular height**. If a line is perpendicular to another line, it meets it at 90 degrees.

Year 7 Term 1 Music
Rhythm and Pulse.

NUMBER	TERM	DEFINITION
1	Pitch	How high or low the music is.
2	Tempo	How fast and slow the music is.
3	Dynamics	How loud and quiet music is.
4	Texture	He layers of music (thick or thin.
5	Structure	The order of sections in the music
6	Pulse	The heartbeat of the music, all rhythms fit to a pulse.
7	Rhythm	A pattern of long and short notes
8	Polyrhythm	A number of different rhythms played at once.

	Symbol	Name	Value	Groupings that = 1	Rest
9		Semibreve	4		
10		Minim	2		
11		Crotchet	1		
12		Quaver	0.5		
13		Semiquaver	0.25		

14.
4 beats in a bar

15
Accent the note

16.
Bar line

Art:

- ❑ To further develop my idea, I could…
- ❑ In my opinion…
- ❑ I have taken inspiration from…

History:

- ❑ This links to my next point because…
- ❑ The source is a…
- ❑ The source was made in…

PE:

- ❑ This is a strength because…
- ❑ This is a weakness because…
- ❑ I conclude…

IT:

- ❑ I agree/disagree with… because…
- ❑ The answer is … because…
- ❑ I could have improved my work by…

EAL:

- ❑ I like… because…
- ❑ I don't like… because…
- ❑ I think…

Maths:

- ❑ … is incorrect because…
- ❑ Another way to work this out is…
- ❑ The mistake is that…

Generic:

You can use these in any lesson:

- ❑ I think…
- ❑ In my opinion…
- ❑ I agree/disagree with … because…
- ❑ The answer is … because…
- ❑ Another way of looking at this is…
- ❑ My first/second/third example is ….

English:

- ❑ The writer first establishes the idea that … when he/she chooses to focus on …
- ❑ It is clear that…
- ❑ This is established/reinforced/developed through the writer's use of…

Science:

- ❑ I can conclude from the data that … as … increases/decreases, … increases/decreases.
- ❑ The pattern the data shows is…
- ❑ One key fact from the topic was…

Technology:

- ❑ The design could do with…
- ❑ Aspects I found difficult were…
- ❑ If I were to do this again I would…

Music:

- ❑ As I listened to the music, I felt…
- ❑ This sounds like…
- ❑ I would suggest they… to improve their performance

Geography:

- ❑ An example of this is…
- ❑ This means that… One positive/negative reason is…
- ❑ Overall, I believe that… The evidence in the figure/source is…

Religious Education

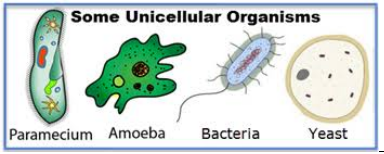
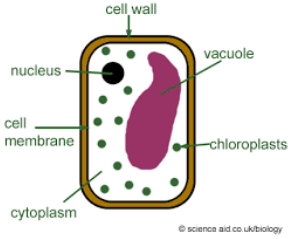
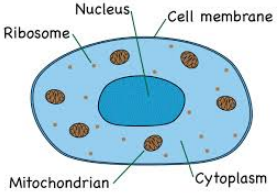
Origins of Abrahamic Faiths

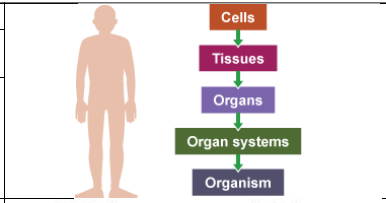
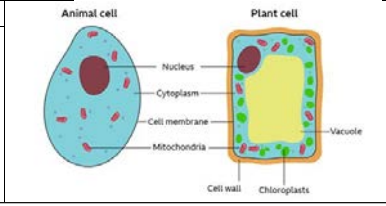
The stories as a starting point		
1	Genesis	The first book of the Jewish and Christian scriptures.
2	Adam and Eve	According to Genesis, they were the first human beings created by God.
3	Noah	The hero of the biblical flood story in the book of Genesis.
4	The Flood	God's decision to return the Earth to its pre-creation state of watery chaos and then remake it in a reversal of creation.
5	Original Sin	The first sin of humans which separated them from God
6	Polytheism	The belief in more than one god.
7	Monotheism	The belief in one God.

The beginnings of Islam		
1	Ishmael	Abraham's son who went on to be ancestor to the Muslim people.
2	Mecca	Holy city for Muslims established by Ibrahim and Ishmael.
3	Ibrahim	The common founder of Judaism, Christianity and Islam.
4	Kaaba	Important place for muslims, built by Ibrahim
5	Muhammad (pbuh)	The final prophet of Islam
6	Qur'an	The Holy Book of Islam
4	Islamophobia	Discrimination against muslims

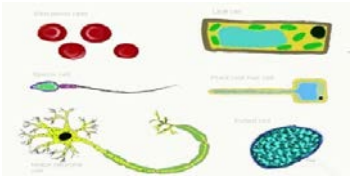
The beginnings of Judaism		
1	Abraham	The common founder of Judaism, Christianity and Islam.
2	Covenant	Conditional promises made to humanity by God.
3	Sacrifice	An act of slaughtering an animal or person or surrendering a possession as an offering to a deity.
4	Isaac	Abraham's son who went on to be ancestor to the Jewish people.
5	Moses	The Hebrew prophet who led the Israelites out of Egypt and delivered the Law during their years of wandering in the wilderness.
6	Exodus	Second book of the Jewish and Christian scriptures which tells the story of Moses and the Israelites.
7	Leviticus	Third book of the Jewish and Christian scriptures which contains laws and ceremonial practices.
8	The day of Atonement	A religious practice described in Leviticus to remove the sins of the community.

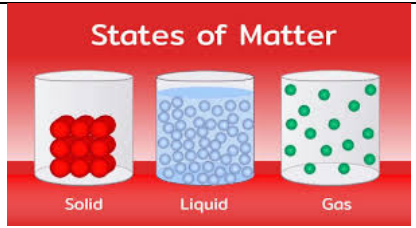
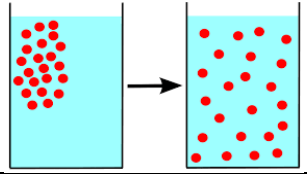
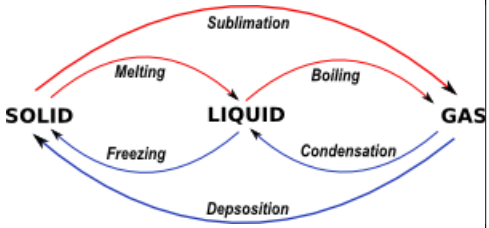
The beginnings of Christianity		
1	Jesus	First-century Jewish teacher who Christians believe to be the Son of God.
2	Pharisees	An ancient Jewish group, distinguished by strict observance of the traditional and written law.
3	Crucifixion	An ancient form of execution in which a person was nailed or bound to a cross.
4	Salvation	Saving from sin and its consequences, believed by Christians to be brought about by faith in Jesus.

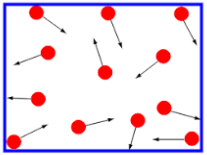
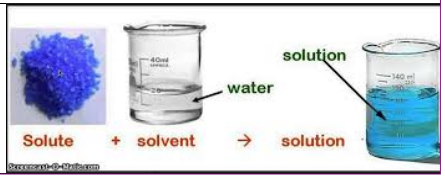
Cells			
	Key word	**Definition**	
1	Microscope	A microscope is an instrument used to see objects that are too small to be seen by the naked eye.	
2	Magnification	The degree to which something is or can be magnified.	
3	Unicellular organism	A living thing that is just one cell. Examples include bacteria, protozoa and unicellular fungi.	
4	Plants	Multicellular organisms made up of many cells.	
5	Chloroplasts	Organelle in the cell used for photosynthesis.	
6	Vacuole	Contains sap (a sugary solution).	
7	Animals	Animals are organisms that are made up of millions of cells.	
8	Nucleus	Contains genetic material (DNA).	
9	Cell membrane	Controls the substances that enter and exit the cell.	

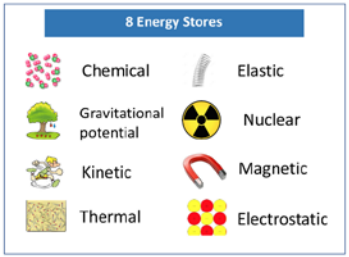
10	Tissue	Similar cells working together.	
11	Organ	Tissues work together to perform a unique function.	
12	Organ system	Organs working together form an organ system.	
13	Different	Distinct, separate	
14	Comparative	The similarity or dissimilarity between one thing and another.	

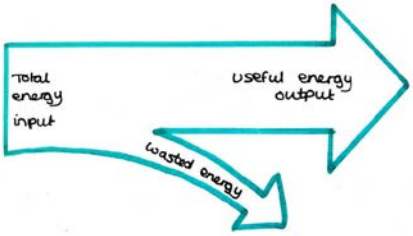
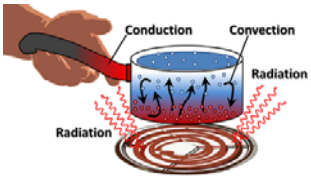
15	Specialised cells	Cells that have developed certain characteristics to perform a particular function.	
16	Motor neuron	These cells communicate with other cells, generating electrical impulses.	
17	Palisade cell	To carry out photosynthesis.	

18	Ciliated epithelial cells	Job in the airway – trapping dirt and moving it along.	
19	White blood cell	Making antibodies to fight pathogens.	
20	Root hair cell	To absorb water and minerals from the soil.	
21	Red Blood Cell	To carry oxygen.	
22	Sperm Cell	To swim to the egg and get through the egg cell membrane to fertilise it.	

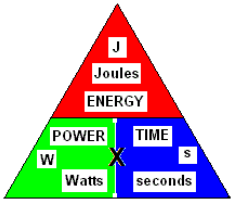
Particles			
	Key word	**Definition**	
1	Solids	Distinct (different ways) in which matter can exist.	
2	Liquids		
3	Gases		
4	Diffusion	Movement of particles from a high concentration to a low concentration.	
5	Melting	When temperature increases particles vibrate faster (solid -liquid).	
6	Freezing	When temperature decreases particles vibrate slower(liquid-solid).	
7	Evaporation	When temperature increases particles vibrate faster (liquid-gas).	
8	Condensation	When temperature decreases particles vibrate slower (liquid-solid).	
9	Sublimation	Solid to a gas and vice versa.	

10	Gas pressure	Caused by the gas particles in a container colliding with the walls of the container.	
11	Heating a gas	Particles will have more kinetic energy and will therefore collide with the walls of the container more frequently and with greater force.	
12	Solution	A special type of homogeneous mixture composed of two or more substances.	
13	Solute	A substance that will dissolve in a liquid.	

Energy			
	Key word	**Definition**	
1	Energy stores (eight types)	Chemical, thermal, elastic, potential, electrostatic, nuclear, gravitational potential, kinetic and magnetic.	
2	Types of energy pathways	Heating, Lighting, sound, electrical and doing work (forces).	

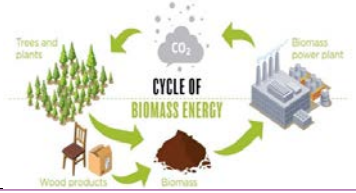
3	Efficiency	Using less energy to perform the same task – that is, eliminating energy waste.	
4	Conservation	The law of conservation of energy states that the total energy of an isolated system remains constant; it is said to be conserved over time.	
5	Energy transfer	The conversion of one form of energy into another.	
6	Conduction	Heat transfer from particle to particle by contact.	
7	Convection	Transfer of energy by rising hot air or liquids.	
8	Radiation	Heat transfer by a wave	

9	Insulator	A substance that reduces energy and transfer of heat.	
10	Emit	To give out e.g. to give out heat.	

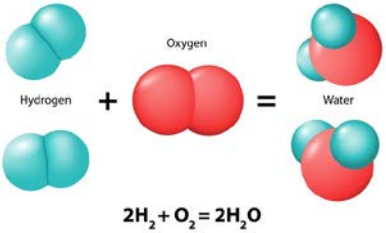
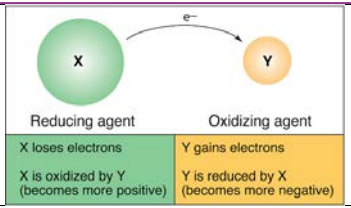
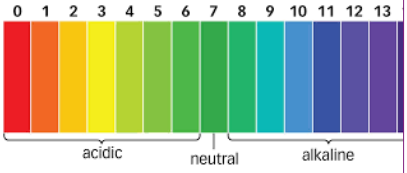
11	Watt	A measurement of power describing the rate at which electricity is being used in a specific moment.	
12	Joules	A measure of the capacity to do work or generate heat. It is equal to the work done by a force of one newton acting through one meter.	
13	Electricity	Electricity is measured in units of power called Watts.	
14	Energy used	Energy = Power x Time	

17	Coal	Coal is a combustible black or brownish-black sedimentary rock, formed as rock strata called coal seams.	

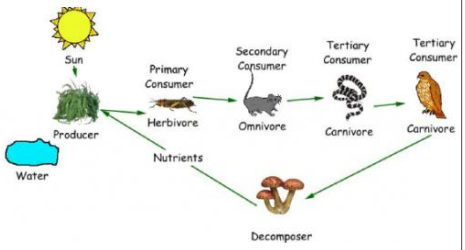
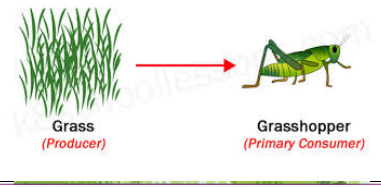
18	Oil	Oil is a fossil fuel that has been formed from a large amount tiny plants and animals such as algae and zooplankton.	
19	Gas	Gases are air-like substances that can move around freely or they might flow to fit a container.	
20	Renewable energy	Renewable energy is energy that is collected from renewable resources.	
21	Solar power	Solar cells generate electricity from sunlight.	
22	Wind power	Electricity is generated when the wind turns the turbines.	

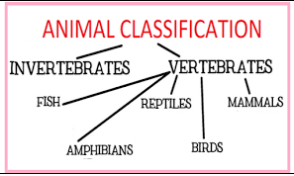
23	Tidal power	Power is generated using moving water.	
24	Geothermal power	Water is pumped down pipes to hot rocks.	
25	Biomass	Biomass fuels come from living things.	

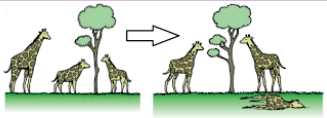
26	Hydroelectric power	Dams and the use of gravitational potential energy.	

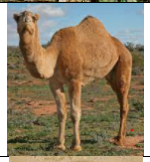
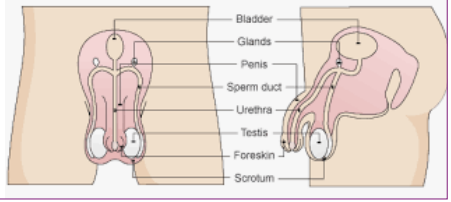
Chemical Reactions			
	Key word	**Definition**	
1	Chemical reaction	A process in which one or more substances, the reactants, are converted to one or more different substances, the products.	
2	Conservation of mass	According to the law of conservation of matter, matter is neither created nor destroyed, so we must have the same number and type of atoms after the chemical change as were present before the chemical change.	
3	Oxidation	Oxidation is the loss of electrons during a reaction by a molecule, atom, or ion.	
4	Reduction	Reduction is the loss of an oxygen atom from a molecule or the gaining of one or more electrons.	
5	Acids	An acid is a molecule or ion capable of donating a proton (hydrogen ion H^+).	
6	Alkalis	Alkalis contain lots of hydroxide ions, symbol OH-.	
7	Neutral	Water is neutral because the number of hydrogen ions is equal to the number of hydroxide ions.	
8	Hazard	A hazard is something that can cause harm.	

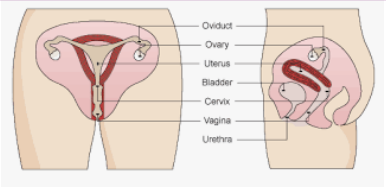
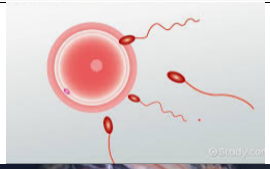
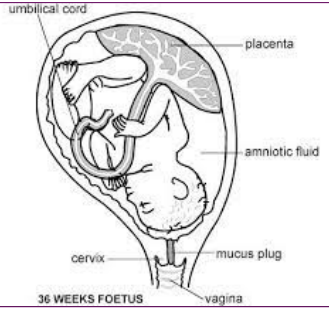
9	Universal indicator	A universal indicator is a pH indicator made of a solution of several compounds that exhibits several smooth colour changes over a wide range of pH values to indicate the acidity or alkalinity of solutions.	
10	pH Scale	The pH scale measures how acidic or alkali a substance is. The pH scale ranges from 0 to 14. A pH of 7 is neutral. A pH less than 7 is acidic. A pH greater than 7 is alkaline.	
11	Reactants	A substance that takes part in and undergoes change during a reaction.	

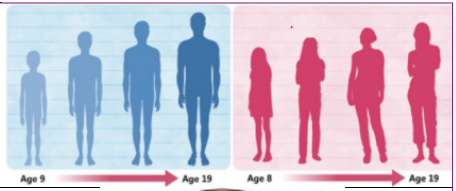
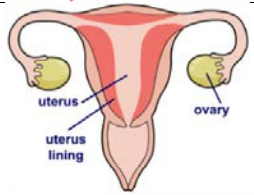
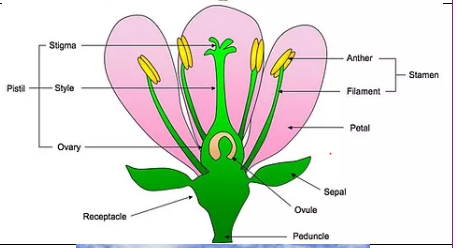
Ecology			
	Key word	**Definition**	
1	Food webs	Food webs show how plants and animals are connected in many ways. The arrow points from the organism being eaten to the organism that eats it.	
2	Food chains	A food chain only follows just one path as animals find food. e.g. A hawk eats a snake, which has eaten a frog, which has eaten a grasshopper, which has eaten grass.	
3	Producers	Organisms that make their own organic nutrients (food) - usually using energy from sunlight. Green plants make their food by photosynthesis.	
4	Consumers	The other organisms in a food chain are consumers, because they all get their energy by consuming other organisms.	

5	Ecosystem	A biological community of interacting organisms and their physical environment.	
6	Sampling	A process used to estimate population size. In this procedure, the organisms in a few small areas are counted and projected to the entire area.	
7	Classification	The classification of species allows the subdivision of living organisms into smaller and more specialised groups.	
8	Adaptation	A characteristic of an organism that improves its chances of surviving and/or reproducing. An organism's adaptations are a result of the genes the organism inherits from its parents.	

9	Natural selection	A process by which a species changes over time in response to changes in the environment, or competition between organisms, for the species to survive.	 Natural Selection in action
10	Evolution	This is change in the heritable characteristics of biological populations over successive generations.	
11	Extinction	This is the cessation of existence of a species reducing biodiversity.	
12	Biodiversity	Biodiversity is the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.	

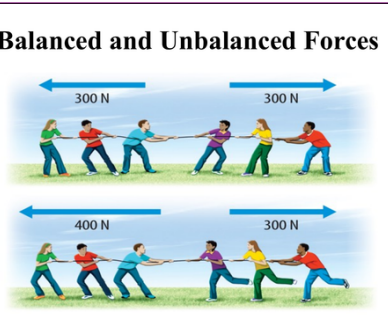
Reproduction			
	Key word	**Definition**	
1	Reproduce	Reproduction (or procreation or breeding) is the biological process by which new individual organisms – "offspring" – are produced from their "parents".	
2	Adaptation	The process by which a species becomes fitted to its environment; it is the result of natural selection acting over several generations.	
3	Egg cell	Female sex cell.	
4	Sperm cell	Male sex cell.	
5	Testes	Part of the male reproductive system that makes the sperm cells.	
6	Penis	Part of the male reproductive system which carry sperm cells out of the body.	

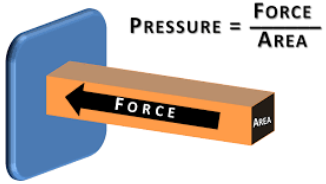
7	Ovary	Part of the female reproductive system that makes the egg cells.	
8	Oviduct	Part of the female reproductive system that connects the ovary to the uterus.	
9	Uterus	Part of the female reproductive system where the foetus develops before birth.	
10	Fertilisation	Fertilisation is the process in which gametes (an egg and sperm) fuse to form a zygote. The egg and sperm each contain one set of chromosomes.	
11	Foetus	An unborn or unhatched offspring of a mammal, in particular an unborn human more than eight weeks after conception.	
12	Gestation	The time it takes for a foetus develop in the uterus.	
13	Placenta	An organ responsible for providing oxygen and nutrients, and removing waste substances.	

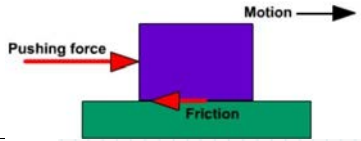
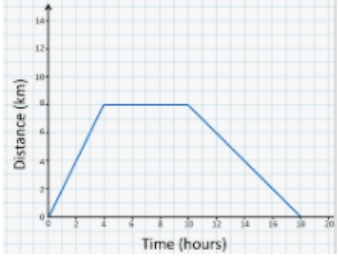
14	Puberty	Puberty is the time in life when a boy or girl becomes sexually mature. It is a process that usually happens between ages 10 and 14 for girls and ages 12 and 16 for boys.	
15	Menstruation	Menstruation — aka having your period — is when blood and tissue from your uterus comes out of your vagina. It usually happens every month.	
16	Ovule	A part of a flower which contains the female seed cell, and after pollination becomes the seed.	
17	Pollen grain	The male sex cell.	
18	Pollination	When the pollen grain from the anther lands on the stigma.	
19	Seed	Is formed from the pollen grain and ovule and can grow into a new plant.	
20	Species	Is a group of similar organisms that can breed with one another to produce fertile offspring.	

21	Sexual reproduction	The production of offspring after fertilisation by the sex cells.	

Forces			
	Key word	**Definition**	
1	Force	A push or a pull that occurs when two objects interact.	
2	Measuring forces	We can measure the size of a force using a newton meter.	
3	Units	The units used to measure a force are newtons.	
4	Resolution	The smallest possible measurement a piece of measuring equipment can measure.	

5	Balanced forces	The opposing forces are equal.	
6	Unbalanced forces	The forces acting in one direction are bigger than those acting in the opposite direction.	
7	Resultant forces	The difference between the two opposing forces.	
8	Gravity	Gravity is the force of attraction between pairs of objects.	
9	Newton	The newton (symbol: N) is the International System of Units (SI) derived unit of force.	
10	Gravitational field	All objects have a gravitational field around them.	
11	Weight	The force of gravity pulling on every kg of mass. It is measured in Newtons (N). We can calculate weight by using W = m x g	
12	Mass	A measure of how much matter an object is made up of. It is measured in kilograms (kg).	
13	Gravitational field strength(of Earth)	10N/kg	

14	Pressure	Pressure is how spread out a force is over an area.	
15	Force	Force = Pressure x Area	
16	Area	Area = Force ÷ Pressure	
17	Speed	Speed is a measure of how quickly an object travels in a given distance.	Distance = Speed x Time Time= Distance / Speed Speed= Distance / Time
18	Velocity	The same as speed, but tells us the direction we are travelling in as well (i.e. forwards or backwards).	

19	Friction	The resistance to motion of one object moving relative to another.	
20	Speed	Speed = distance ÷ time	
21	Distance-time graph	This shows how far an object has travelled in a given time.	

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