



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



# Knowledge Organiser

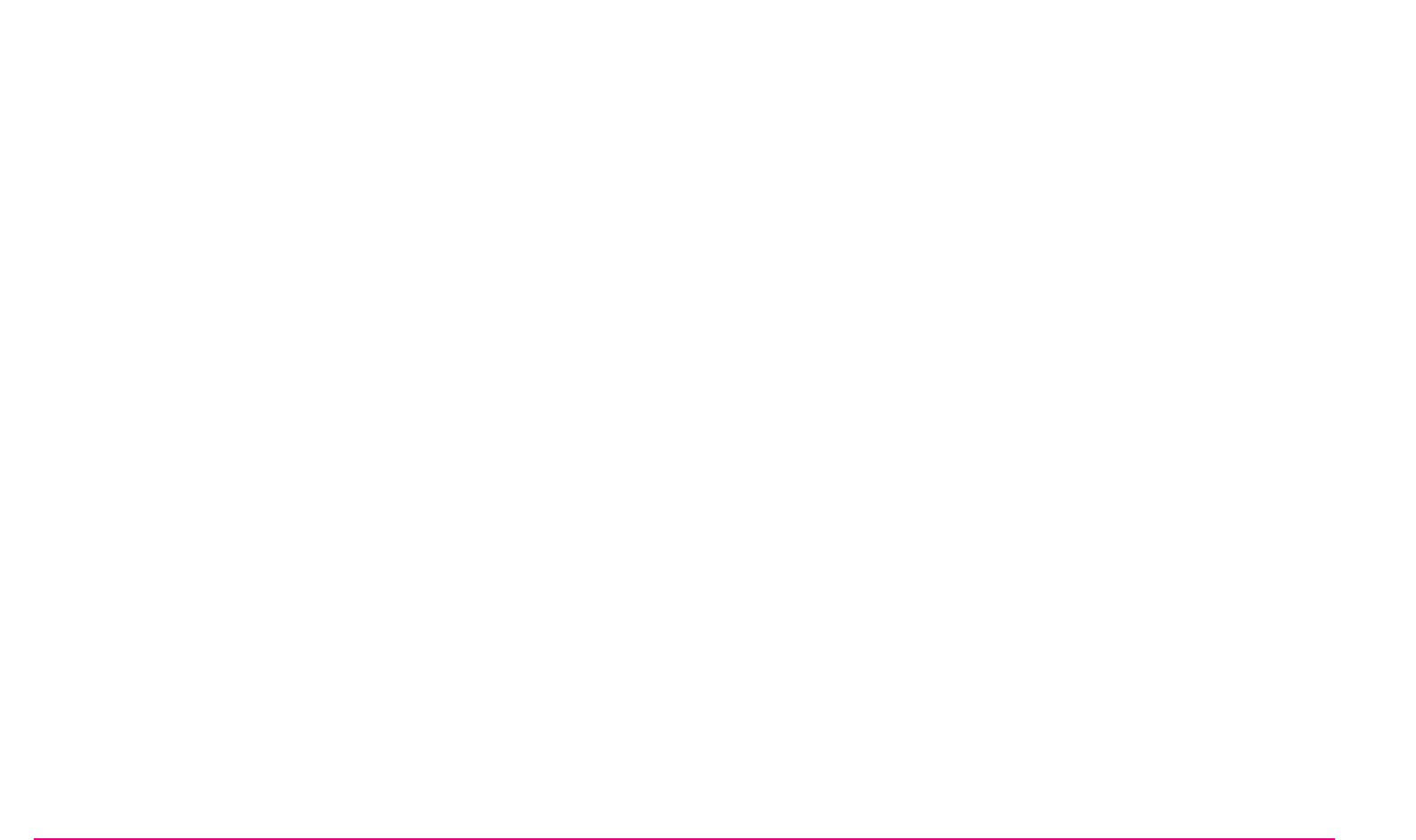
## Term 1

Name: .....

Tutor Group: .....

Tutor & Room: .....

**AMBITION • KNOWLEDGE • DETERMINATION**



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# How do I complete Knowledge Organiser homeworks?

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

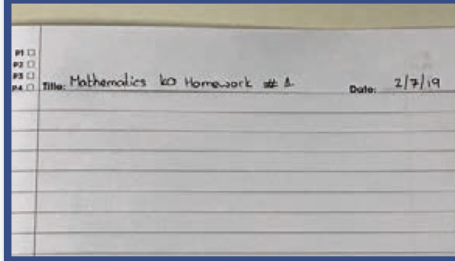
## STEP 1

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



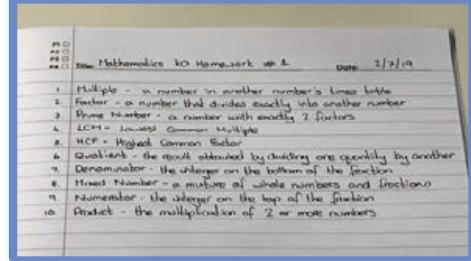
## STEP 2

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



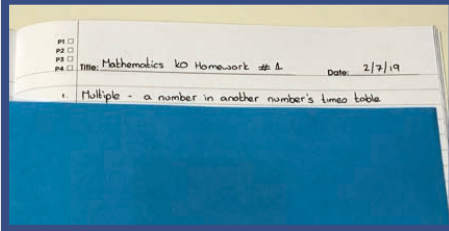
## STEP 3

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



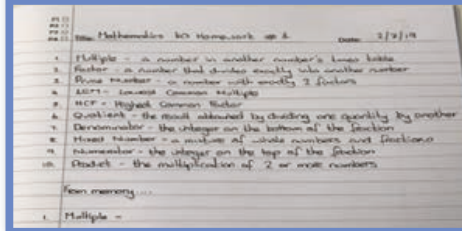
## STEP 4

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



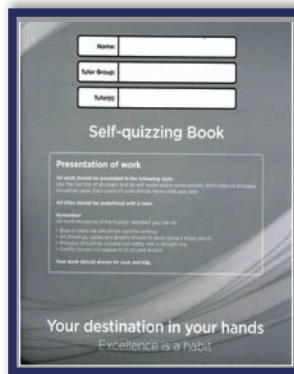
## Knowledge Organisers

Knowledge Organisers contain critical, fundamental knowledge that you **MUST** know in order to be successful in Year 8 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 8 will also be required in Year 9.

Knowledge Organisers are **NOT** a replacement for revision guides but they include the fundamental knowledge that ALL students in Year 8 require.



## Y8 Art and Design – Sweets and Treats

### Key Words

1	<b>Construction</b>	The action of building something, typically a large structure.
2	<b>Still life</b>	Inanimate objects represented in a drawing, painting or collage.
3	<b>Primary Colours</b>	The three main colours. They cannot be made, but are used to make all other colours.
4	<b>Secondary Colours</b>	These are made by mixing 2 primary colours.
5	<b>Texture</b>	The surface quality of something, the way something feels or looks like it feels.
6	<b>Form</b>	The way something looks three-Dimensional
7	<b>Shape</b>	A two-Dimensional area defined by an outline.

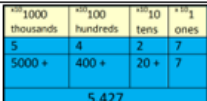

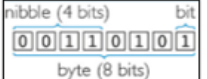


### Techniques

8	<b>Observational Drawing</b>	Drawing or painting from life.
9	<b>Mark Making</b>	The creation of different lines, patterns and textures we create in a piece of art.
10	<b>Card Manipulation</b>	Transforming and manipulating card into another form/shape.
11	<b>Collage</b>	A piece of art made by using piece various materials such as paper, arranged and stuck down on a surface.
12	<b>Grid Drawing</b>	Placing a grid over your image and using the grid to improve the accuracy of your drawing.
13	<b>Relief sculpture</b>	Is created on a flat, two-dimensional surface. The back of the sculpture is typically unseen.

**Year 8**  
**Computer Science Term 1 Knowledge Organiser**

Binary Key Terms		
1	<b>Decimal</b>	Base 10 number system (numbers 0 – 9) e.g. 259
2	<b>Binary</b>	Base 2 number system that uses two numbers (numbers 0 and 1) e.g. 10010101
3	<b>Integer</b>	Whole number (not a fraction) e.g. 25
4	<b>Bit</b>	Binary digit A unit of binary It can be a 1 or a 0
5	<b>Byte</b>	A string of 8 bits. E.g. 10101101
6	<b>Memory Size</b>	Bit A single 0 or 1 Byte (B) 8 bits Kilobyte (KB) 1024 bytes Megabyte (MB) 1024 kilobytes Gigabyte (GB) 1024 megabytes Terabyte (TB) 1024 gigabytes Petabyte (PB) 1024 terabytes

Binary														
1	<b>Binary</b>	Binary works like the decimal system except that it only uses two digits (0 and 1). In the decimal system digits increase by 10, whereas in binary digits increase by 2												
2	<b>Decimal system</b>													
3	<b>Binary system</b>													
4	<b>Binary Units</b>	Each unit of binary is called a bit. The collections of those units have different names  <table border="1"> <thead> <tr> <th>Unit/ Bits</th><th>Name</th><th>Example</th></tr> </thead> <tbody> <tr> <td>1</td><td>Bit</td><td>0</td></tr> <tr> <td>4</td><td>Nibble</td><td>1101</td></tr> <tr> <td>8</td><td>Byte</td><td>1011001</td></tr> </tbody> </table>	Unit/ Bits	Name	Example	1	Bit	0	4	Nibble	1101	8	Byte	1011001
Unit/ Bits	Name	Example												
1	Bit	0												
4	Nibble	1101												
8	Byte	1011001												
5	<b>Adding Binary Rules</b>	$0+0 = 0$ $1+0 = 1$ $0+1 = 1$ $1+1 = 1$ Carry 0 $1+1+1 = 1$ Carry 1												

## Y8 Melodrama and The Tempest - Term 1

### Areas for Assessment

<b>1. Creating</b>	The ability to work within a group to create and develop performance work.
<b>2. Performing</b>	The ability to present a character using physical and vocal skills.
<b>3. Evaluating</b>	The ability to discuss the qualities of a performance using dramatic language.

### Melodrama

<b>4. Melodrama</b>	A style of theatre popular in Victorian times, with exaggerated characters.
<b>5. Plot</b>	The main events of a devised, written or improvised play,
<b>6. Scenario</b>	A written outline of a play giving details of the plot and individual scenes.
<b>7. Stock characters</b>	A stock character is a fictional character that relies heavily on cultural types or stereotypes for its personality, manner of speech, and other characteristics.

### The Tempest

<b>8. Tempest</b>	A violent storm
<b>9. Tragicomedy</b>	A play that has some features of a tragedy and some features of a comedy.
<b>10. Pathos</b>	A situation that makes us feel sympathy or sorrow.
<b>11. Character interpretation</b>	The character in terms of age, social class, intent and motivation, background and their relationship with the rest of the characters in the scene.



**1. Context****Author:** Bram Stoker (1847-1912)**Nationality:** Irish**Other notable works:** 'The Jewel of Seven Stars', 'The Lair of the White Worm'**Dates:** written between 1891-1897, published in 1897**Era:** Victorian, late 19<sup>th</sup> Century**Genre:** Gothic, horror**Set:** Transylvania, Romania; London; Whitby, North Yorkshire**Form:** Epistolary**Author biography**

- Bram Stoker was born in Dublin, Ireland, in 1847.
- Studied maths at Trinity College and graduated in 1867.
- Joined the Irish civil service and also worked as a freelance journalist and drama critic.
- Married an actress, Florence Balcombe, and had one son, Noel.
- Moved to London where he moved in literary circles, which included figures such as Oscar Wilde, Arthur Conan Doyle, and Alfred Lord Tennyson.
- His early novels and short stories did not achieve much success.
- His greatest literary achievement came with the publication of *Dracula* in 1897.
- The novel was not an immediate popular success but is now regarded as a classic.
- Dracula* has been in print continuously since its first publication and has inspired countless films and other literary works.

**Social, Historical & Literary context****Vampires**

- Vampire legends have been a part of popular folklore in many parts of the world since ancient times.
- From the Middle Ages to the modern era, reports of corpses rising from the dead with supernatural powers achieved widespread acceptance.
- The *Dracula* family is based on a real fifteenth-century family.
- Most famous vampire was The Prince of Wallachia, Vlad Dracula, or Vlad the Impaler as he was commonly known.
- Count Dracula is supposed to be a descendant of Vlad, and not the prince himself.

**The Gothic genre**

- The word 'gothic' was first applied to Horace Walpole's novel: *The Castle of Otranto* 'A Gothic Story', published in 1764.
- The gothic genre became popular in the late 18<sup>th</sup> and 19<sup>th</sup> centuries, during a time of great discovery and change. Scientific discoveries were prompting people to question their previously held beliefs. People were prepared to suspend reason in search of new meaning.
- Gothic novels emphasised mystery, horror and the uncanny.
- Typical characteristics of the gothic genre are: castles, crumbling buildings, gloomy/remote locations, dark forests, damsels in distress, villains.
- Themes explored include: good versus evil; morality; beauty versus the grotesque; the struggle between reason and imagination.
- Gothic fiction shared some of the ideals of Romanticism which focused on the "sublime" power of nature.

**2. Key Characters****Count Dracula:** a mysterious Transylvanian nobleman. Lives in an old, crumbling castle in the Carpathian Mountains.**Abraham Van Helsing:** a Dutch professor, described as one of the most advanced scientists of his day.**Jonathan Harker:** a solicitor whose firm sends him to Transylvania to complete a real estate business deal with Dracula. Engaged to Mina Murray.**Mina Murray:** Jonathan Harker's fiancée. She works as a schoolmistress.**Lucy Westenra:** Mina's best friend. She is a beautiful and lively young woman.**Arthur Holmwood:** Lucy's fiancé and friends with Seward, Morris and Harker. Arthur is the son of Lord Godalming and inherits that title upon his father's death.**John Seward:** a talented young doctor, and a former student of Van Helsing's. Seward is the manager of an insane asylum. A suitor for Lucy.**Quincey Morris:** a straight talking American from Texas. Another suitor for Lucy.**Renfield:** a patient at Seward's mental asylum.**Mrs. Westenra:** Lucy's mother.**3. Key Terminology**

<b>Gothic fiction</b>	Refers to a style of writing that is characterised by elements of fear, horror, death, and gloom and extreme emotions.
<b>epistolary novel</b>	A novel written as a series of documents, usually in the form of letters. Although newspaper clippings, diary entries and other documents can be used e.g. police reports, doctors notes.
<b>literary Conventions</b>	Defining features of particular literary genres, such as novel, short story, ballad, sonnet, and play.
<b>characterisation</b>	A literary device in which an author builds up a character in a narrative.
<b>setting</b>	The time and place in which the story takes place in a piece of literature. Setting can establish the mood or atmosphere of a scene or story.
<b>tone</b>	The choice of writing style the writer employs to convey specific feelings, emotions or attitudes.
<b>mood</b>	The feelings or atmosphere perceived by a reader in a piece of literature, established by the writer's methods e.g. through language or setting.
<b>symbolism</b>	The use of symbols to express ideas or qualities.

**4. Key Vocabulary**

	Definition
<b>insidious</b>	Something dangerous or unpleasant gradually and secretly causing harm.
<b>redemption</b>	The action of saving, or being saved from sin, error or evil.
<b>supernatural</b>	A manifestation or event attributed to some force beyond scientific understanding or the laws of nature.
<b>superstition</b>	A widely held but irrational belief in supernatural influences, especially as leading to good or bad luck.
<b>asylum</b>	An institution for the care of people who are mentally ill.
<b>aquiline</b>	Describing a person's nose as hooked or curved like an eagle's beak.
<b>pallor</b>	An unhealthy pale, appearance
<b>prodigious</b>	Unnatural or abnormal
<b>malignant</b>	Evil in nature or effect; malevolent.
<b>macabre</b>	Used to describe something that is strange or disturbing as it is connected with death or gruesome acts.
<b>melodramatic</b>	Showing much stronger emotions than are necessary or usual for a situation.
<b>grotesque</b>	Repulsively ugly or distorted, especially in a comical or frightening way.
<b>Feminism</b>	The belief that women should be allowed the same rights, opportunities and power as men.
<b>New Woman</b>	A feminist ideal that became popular in the late 19 <sup>th</sup> century and influenced feminism in 20 <sup>th</sup> century.
<b>repulsion</b>	A feeling of intense distaste or disgust.

**3. Key Terminology**

<b>motif</b>	A dominant or recurring idea in an artistic work.
<b>exposition</b>	Refers to part of the story used to introduce background information about events, settings, characters etc. to the reader.
<b>rising action</b>	A related series of incidents in a literary plot that build toward the point of greatest excitement/interest.
<b>climax</b>	The point of highest tension in a narrative.
<b>falling action</b>	Occurs immediately after the climax, when the main problem of the story has been resolved.

**YEAR EIGHT****UNIT: 19<sup>th</sup> Century Text- DRACULA**

1. Context
<p><b>Playwright:</b> Shakespeare (April 23<sup>rd</sup> 1564-April 23<sup>rd</sup>1616)</p> <p><b>Dates:</b> written around 1592–1594.</p> <p><b>Published:</b> in <i>‘The First Quarto’</i> in 1597</p> <p><b>Era:</b> Renaissance (1500-1600)</p> <p><b>Genre:</b> History (sometimes classified as a tragedy)</p> <p><b>Set:</b> England, late 15<sup>th</sup> Century (ends at Battle of Bosworth)</p> <p><b>Structure:</b> Five Act Play</p>
<p><b>Biography of Shakespeare</b></p> <ul style="list-style-type: none"><li>• Born in Stratford-Upon-Avon on April 23<sup>rd</sup> 1564.</li><li>• Married Anne Hathaway in 1582.</li><li>• Left his family around 1590 to move to London to become an actor and playwright.</li><li>• Highly successful, he established himself as the most popular playwright of his day.</li><li>• Part-owner of The Globe Theatre in London.</li><li>• His first theatre group was called Lord Chamberlain’s Men, later changed to the King’s Men (1603) under the patronage of King James I.</li><li>• A prolific writer who is said to have written at least thirty-seven plays, as well as narrative poems and a collection of sonnets.</li><li>• Died on his birthday in Stratford-upon-Avon in 1616.</li></ul> <p><b>Notable works</b></p> <p>Shakespeare’s plays can be categorised into three genres.</p> <ul style="list-style-type: none"><li>○ <b>Tragedy:</b> e.g. <i>‘Macbeth’</i>, <i>‘King Lear’</i>, <i>‘Hamlet’</i></li><li>○ <b>History:</b> e.g. <i>‘Richard III’</i>, <i>‘Antony &amp; Cleopatra’</i>, <i>‘Henry V’</i></li><li>○ <b>Comedy:</b> e.g. <i>‘Much Ado About Nothing’</i>, <i>‘As you Like It’</i>, <i>‘Twelfth Night’</i></li></ul>
<p><b>Social, Historical &amp; Literary Context</b></p> <ul style="list-style-type: none"><li>• Written probably in 1610-1611</li><li>• Most likely the last play written by William Shakespeare</li><li>• Draws on travel literature of the time – most notably accounts of a tempest off the Bermudas that nearly wrecked a fleet of colonial ships from Plymouth to Virginia.</li></ul>

YEAR EIGHT	
UNIT: SHAKESPEARE- The Tempest	
2. Key Characters	
Prospero - the rightful Duke of Milan	
Miranda - Prospero’s daughter	
Ariel - an airy spirit; a slave of Prospero’s who earns his freedom	
Caliban -a savage and deformed slave of Prospero’s; a native of the island	
Ferdinand – Alonso’s son	
Antonio - Prospero’s brother. Antonio stole Prospero’s title as Duke of Milan.	
Alonso -King of Naples	
Trinculo - a jester	
Stephano - – a drunken butler	
Gonzalo – the old counsellor to the King of Naples	
3. Key Terminology	
<b>Pathetic fallacy</b>	The attribution of human feelings and responses to inanimate things or animals, especially in art and literature.
<b>Literary Conventions</b>	Defining features of particular literary genres, such as novel, short story, ballad, sonnet, and play.
<b>soliloquy</b>	A speech or passage in a drama when a character on stage speaks to himself /herself or the audience, expressing their inner thoughts and feelings.

4. Key Vocabulary	
	<b>Definition</b>
Jacobean	relating to the reign of James I of England.
submissive	ready to conform to the authority or will of others; meekly obedient or passive.
passive	accepting or allowing what happens or what others do, without active response or resistance.
tyrant	A cruel and oppressive ruler.
manipulative	exercising unscrupulous control or influence over a person or situation.
authority	the power or right to give orders, make decisions, and enforce obedience.
deception	the action of deceiving someone.
revenge	the action of hurting or harming someone in return for an injury or wrong suffered at their hands.
justice	just behaviour or treatment
colonialism	the policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically.
defiance	open resistance; bold disobedience.
sin	an immoral act considered to be a transgression against divine law.
freedom	the power or right to act, speak, or think as one wants.
empathetic	showing an ability to understand and share the feelings of another.
restoration	the reinstatement of a previous practice, right, or situation.
3. Key Terminology	
<b>aside</b>	A remark or passage in a play that is intended to be heard by the audience but is supposed to be unheard by the other characters on the stage.
<b>blank verse</b>	Unrhymed lines written in a poetic meter and usually written in iambic pentameter ( <i>see below</i> ).
<b>rhyming couplets</b>	Two successive lines of verse of which the final words rhyme with another.
<b>iambic pentameter</b>	A line of verse with five metrical feet, each consisting of one short (or unstressed) syllable followed by one long (or stressed) syllable, with the accent (or emphasis) placed on the second syllable.

## Year 8 -Knowledge Organiser

1	<b>Food Hygiene</b>	<b>Food Hygiene</b> is the practice of storing, preparing and handling food safely to prevent spread of bacteria and food poisoning.
2	Bacteria	Bacteria are microscopic organisms not visible with the naked eye. <b>Bacteria</b> are everywhere, both inside and outside of your body.
3	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.
4	Claw grip	The <b>claw grip</b> uses your fingertips to grip the food in a <b>claw</b> shape keeping the knife away from your fingertips.
5	Enzymic browning	<b>Enzymic browning</b> is a reaction that takes place in some foods, mostly <b>fruit</b> and vegetables, when exposed to oxygen the food turns <b>brown</b> .
6	Rubbing in method	' <b>Rubbing</b> in' is a <b>technique</b> where flour is <b>rubbed</b> into a fat. It is used to make short crust pastry, crumbles and scones.

Bridge  
holdClaw  
grip

7.	The eat well Guide	Current government guidelines in healthy eating in the Uk. The 5 food groups are: Fruit and Vegetables /Starchy Carbohydrates/Proteins/ Dairy and alternatives/ Oils and Spreads
8.	Nutrients	<b>Nutrients</b> are the building blocks that make up food and have <u>specific and important roles to play in the body</u> . There are <b>5 main groups of nutrients</b> . <b>Proteins, Fats, Carbohydrates, Vitamins and Minerals</b>
9.	Macro nutrients	These are needed by the body in large amounts eg, Carbohydrates, Proteins and fats.
10.	Micro nutrients	These are needed by the body in small amounts eg, vitamins and minerals
11.	Carbohydrates	<b>Two types:</b> <b>1. Starchy (complex) - slow release energy</b> to the body <b>2. Sugary (simple) - quick release energy</b> to the body's' cells.

**Y8 French – Daily routine and health**

A.	Daily routine expressions	
1	Je me reveille	I wake up
2	Je me lève	I get up
3	Je m'habille	I get dressed
4	Je me brosse les dents	I clean my teeth
5	Je me lave	I wash
6	Je prends mon petit déjeuner	I have my breakfast
	Je vais au collège	I go to school
8	J'étudie	I study
9	Je renter chez moi	I go back home
10	Je regarde la télé	I watch TV
11	Je fais mes devoirs	I do my homework
12	Je me couche	I go to bed
B.	Healthy lifestyles	
1	Rester en forme	To keep fit
2	Etre en bonne santé	To be in good health
3	Faire de l'exercice	To exercise
4	Faire du sport	To play sports
5	Manger sain	To eat healthy food
6	Bon pour la santé	Good for your health
7	C'est important de	It's important to

C.	Future tense	
1	Je vais	I am going
2	Il va	He is going
3	Elle va	She is going
4	On va	We are going
5	Manger	To eat
6	Boire	To drink
7	Faire	To do
8	Etre	To be
9	Ce sera	It will be
10	Je vais manger	I am going to eat
11	Je ne vais pas manger	I am not going to eat
D.	At the doctor	
1	Il faut	You must
2	Prendre du sirop	To take some syrup
3	Prendre des médicaments	To take medications
4	Aller chez le dentiste	To go to the dentist
5	Aller a la pharmacie	To go to the pharmacy
6	Rester au chaud	To stay warm
7	Une/deux/trois fois par semaine	Once/twice/three times a week

E.	Adjectives	
1	Amusant	Fun
2	Divertissant	Entertaining
3	Actif/ve	Active
4	Sportif/ve	Sporty
5	Important	Important
6	Essential	Essential
7	Délicieux	Delicious
8	Facile	Easy
9	Fatigant	Tiring
10	Barbant	Boring
11	Ennuyeux	Boring
12	Dégoutant	Disgusting
13	Difficile	Difficult
14		

F.	Time phrases	
1	L'année dernière	Last year
2	Le mois dernier	Last month
3	La semaine dernière	Last week
4	Hier	Yesterday
5	Aujourd'hui	Today
6	Maintenant	Now
7	Ce soir	Tonight
8	Demain	Tomorrow
9	La semaine prochaine	Next week
10	Le mois prochain	Next month
11	L'année prochaine	Next year
12	Rarement	Rarely
13	De temps en temps	From time to time
14	Quelquefois	Sometimes
15	Souvent	Often
16	Toujours	Always
17	Chaque jour	Each day
18	Chaque soir	Each evening

1.	Wave types
Swash	The movement of waves up the beach.
Backwash	The movement of waves back down the beach.
Fetch	An area of ocean, sea or lake surface over which the wind blows in an essentially constant direction, thus generating waves.
Constructive waves	Waves which build beaches. They have a <b>strong swash</b> and a <b>weak backwash</b> .
Destructive waves	Waves which erode the coastline. These are taller and have a <b>weak swash</b> and a <b>strong backwash</b> .

2.	Coastal processes
Erosion	The wearing away of the earth's surface by ice or water.
Weathering	The physical and chemical breakdown of rocks and minerals at or near the earth's surface.
Hydraulic action	The sheer force of water can erode material from the cliffs. It can make cracks in the headland larger.
Abrasion	The material being transported by the sea wears away the cliffs (like sandpaper).
Attrition	When pebbles are knocked together and they gradually become more rounded and reduced in size.
Solution	Rocks are subject to chemical attack and slowly dissolve in the water.
Longshore drift	The movement of material along the coastline by the sea in a zig-zag pattern.
Deposition	When the river or sea drops the material it is carrying.
Material	The sand, pebbles or silt that the sea is carrying.

3.	Headlands, bays and wave cut platforms.
Headland	Part of the coastline that juts out into the sea (typically hard rock).
Bay	A wide, curved inlet where the soft rock has eroded.
Concordant coastline	These occur when bands of differing rock type run parallel to the coast. This means that the coastline is on <b>one</b> type of rock.
Discordant coastline	These occur where bands of differing rock types run perpendicular to the coast. This means you have <b>different types of rock</b> at the coastline.
Wave cut platform	A gently sloping rock ledge that extends from the high-tide level at the steep-cliff base to below the low-tide level.
Retreats	Moving backwards.

4.	Erosion of a headland.
Crack	A weakness/ split in the headland.
Cave	When a crack gets widened through hydraulic action and abrasion.
Arch	A cave that has been eroded all the way through.
Stack	When the roof of an arch collapses, a stack is left behind.
Stump	A stack is eroded further by hydraulic action and abrasion to form a stump.

7.	Causes and effects of coastal erosion.
Causes	What the reasons are for something happening.
Effects	What happens because of the cause.
Social effects	Factors to do with people. E.g. losing their homes.
Economic effects	Factors to do with jobs and money.
Environmental effects	Factors to do with the surrounding environment e.g. water pollution.

5.	Depositional landforms.
Spits	A narrow band of sand or shingle which stretches out from the coastline, deposited by longshore drift.
Sand Dunes	A sand dune is a large deposit of sand which forms on the dry backshore of a sandy beach. Over time, plants adapt to survive on the dunes.
Bar	When longshore drift deposits material between one headland and another.
Tombolo	When longshore drift deposits material between a headland and an island.

6.	Tourism
Tourism	Travelling away from home for leisure or business.
The Butler model	A model which shows how tourist resorts change over time.
Natural resources	Materials or substances which can be gathered from nature.
Benefits	Positives.
Challenges	Negatives.

9.	The Holderness coast.
Boulder clay	A soft rock which parts of the Holderness coast is made up of. It erodes easily.

8.	Hard and soft engineering
Hard engineering	Features that we build using concrete or wood to protect the coastline from the energy from the sea.
Soft engineering	Natural defences against the sea.
Groynes	Wooden or rock posts which run out to sea. They help prevent longshore drift.
Sea wall	These are made of concrete and often have a curved top to reflect the energy of the waves back out to sea.
Beach nourishment	This is where sand and shingle from elsewhere are added to the beach. This can be pumped from the bottom of the sea using boats.
Managed retreat	Do nothing and allow the coast to erode and flood as it would naturally.



## Year: 8 - Knowledge Organiser

### Topic: Henry VIII's Break from Rome



#### Areas of our study

1. Henry VII's Problem
2. Henry VIII's Problem
3. Catholic vs Protestant
4. Henry VIII's Divorce
5. Break from Rome
6. Dissolution of the Monasteries
7. Thomas Cromwell
8. Scotland and France
9. Henry VIII – How Powerful was he?

#### Key Words – Individuals – Break from Rome

1	<b>House of York</b>	Royal line based in York, descendant of Edward III
2	<b>House of Lancaster</b>	Royal line based in Lancaster, descendant of Edward III
3	<b>Tudor</b>	Minor Welsh house that came to power after the War of the Roses
4	<b>Richard III</b>	Last king of the House of York. Died at the b. Bosworth
5	<b>Monastery</b>	Religious building where Monks/Nuns provided Education/Medical care
6	<b>Abbey</b>	a monastery run by an abbot
7	<b>Catholic</b>	Original Branch of the Church in Europe. Based in Rome with the Pope as head
8	<b>Protestant</b>	One of the western Churches that separated from the Catholic Church in the 1500s
9	<b>Heir</b>	A person who has the right to inherit or become the next king
10	<b>Dissolution</b>	To take apart or end the existence of something
11	<b>Divorce</b>	The official ending of a marriage
12	<b>Thomas Cromwell</b>	Cromwell served as principal adviser to Henry VIII during those years, established the English Reformation
13	<b>Political/ Power</b>	Having to do with power and government
14	<b>Economic/ Money</b>	Having to do with money and/or land
15	<b>Religious/ Religion</b>	Having to do with control over England's religion and faith
16	<b>Pope Clement VII</b>	Pope at the time of the English split from the



#### Key Assessment

#### Break from Rome

#### Key dates – Break from Rome

AD 1509	Henry VIII becomes king, Catholic
AD 1521	Henry named Defender of the Faith (Catholic)
AD 1532	Stopped payments to the Pope from English Church
AD 1533	Catherine of Aragon is divorced
AD 1534	Henry VIII declared Head of Church of England
AD 1536	Smaller <u>monasteries</u> <u>dissolved</u>
AD 1538	Edward is born
AD 1539	Larger monasteries dissolved
AD 1539	English translation of the Bible published
AD 1547	Edward VI becomes king, Protestant
AD 1553	<u>Mary</u> I becomes queen, Catholic
AD 1558	<u>Elizabeth</u> I becomes queen, Protestant

Elizabeth

Mary

Henry VIII,  
Edward and  
Queen Jane  
Seymour

## History - Knowledge Organiser

## Y8 - Tudor religious rollercoaster

## Key Monarchs

1	Henry VIII	King of England from 1509 - 1547 - Broke from Rome and formed the slightly more Protestant Church of England with The Bible in English.
2	Edward VI	King of England from 1547 - 1553 - Made England significantly more Protestant eg Book of Common Prayer in English and priests can marry.
3	Mary I (Bloody Mary)	Queen of England from 1553 - 1558 - Tried to turn England back to Catholicism. Burned 289 Protestants at the stake and married Philip.
4	Elizabeth I	Queen of England from 1558 - 1603 - Tried to find a religious settlement between Protestantism and Catholicism but was more Protestant.

## Key terms

## Definition

1	Catholic	The older form of Christianity where people followed The Pope in Rome and read Latin Bibles.
2	Protestant	The newer form of Christianity where people read The Bible in their own language (eg English).
3	Puritans	Extremist Protestants who opposed Catholics,
4	The Church of England	Henry VIII's new church which he was head of instead of The Pope. Became more Protestant.
5	Excommunicate	Officially exclude (someone) from The Catholic Church. The Pope did this to Henry VIII.
6	Latin	The old language of Rome. Catholics said The Bible and church services should be in Latin.
7	Transubstantiation	Catholics believed that when they drank wine and ate bread at Holy Communion, a miracle occurred and it turned into the blood and bones of Christ.
8	Pope	The head of The Roman Catholic Church.
9	Excommunicate	Officially exclude (someone) from The Church. Not allowed to take part in ceremonies (eg christenings, weddings and funerals) or services.
10	Armada	Spanish word for a fleet of ships. The Spanish Armada planned to invade and conquer England.

**1521** Henry VIII called 'FD' by The Pope for being a good Catholic.

**1548-1553** - Edward imprisons Catholic bishops in The Tower of London eg Bishop Gardiner.

**1549** - Rebellion because of Edward VI's English Book of Common Prayer in Devon and Cornwall (people spoke Cornish) defeated.

**1554** - Bloody Mary marries Philip of Spain as Spain was the most powerful Catholic Country in Europe.

**1584** - Puritan Robert Browne submits to Whitgift despite having 10-12,000 followers. He had been in The Netherlands.

**1603** - Death of Elizabeth I

**1521 1534 1540 1548 1549 1554 1555 1584 1588 1601 1603**

**1534** - Henry VIII breaks with Rome and declares himself head of The C of E.

**1536-1540** Dissolution of The Catholic Monasteries so Henry can steal wealth for wars.

**1554** - Bloody Mary executes Lady Jane Grey after Sir Thomas Wyatt rebels and tries to put Lady Jane grey back on the throne.

**1555** - Latimer, Ridley and Cranmer burned at the stake by Bloody Mary

**1588** - Spanish Armada destroyed. Threat of Catholic invasion passes.

**1601** - Elizabeth I repatriates The Blackmoores as they aren't Christians.

## Can I write in paragraphs?

### The **TIPTOP** rule

You move onto a new paragraph when you change **time**, **place**, **topic** or **person**.

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  
Whereas  
Nevertheless  
Alternatively  
Consequently

But  
Since  
Yet  
Therefore  
Besides

Meanwhile  
Nonetheless  
However  
Although  
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 ~~begin'~~
- ◆ 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  
Aren't  
Can't  
Couldn't  
Didn't  
Doesn't  
Don't  
Hadn't  
Hasn't  
Haven't  
He'd  
He'll  
He's  
How'd  
How's

I'd  
I'll  
I'm  
Isn't  
It'd  
It'll  
It's  
Mightn't  
Mustn't  
She'd  
She'll  
She's  
Shouldn't  
They'd  
They'll

We'd  
We'll  
We're  
Weren't  
What's  
When's  
Where'd  
Where's  
Who'd  
Who'll  
Who's  
Why'd  
Why'll  
Why's

## 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  
bare/bear  
brake/break  
buy/by  
grate/great  
hair/hare  
hole/whole  
hour/our  
knight/night  
know/no  
meat/meet

one/won  
passed/past  
peace/piece  
practice (n)/practise (v)  
read/red  
sea/see  
sight/site  
to/too/two  
wait/weight  
weak/week  
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:

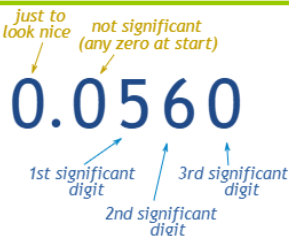
- ❖ **Your** is possessive as in *this is your pen*
- ❖ **You're** is short for **you are** as in *you're coming over to my house*

**Indices**

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

**Significant Figures**

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


**Factors, Multiples & Primes**

Key Word	Definition & Example
<b>5. Factor</b>	An integer that divides into another integer exactly. E.g. <i>List the factors of 28</i> 1, 28, 2, 14, 4, 7
<b>6. Multiple</b>	A number in that numbers times tables. E.g. <i>List the first ten multiple's of 7</i> 7, 14, 21, 28, 35, 42, 49, 56, 63, 70
<b>7. Highest Common Factor (HCF)</b>	The largest number that is a factor of at least two numbers. E.g. <i>Find the HCF of 28 and 12</i> <i>Factors of 28:</i> 1, 28, 2, 14, 4, 7 <i>Factors of 12:</i> 1, 12, 2, 6, 3, 4 <div style="text-align: right;"><math>HCF = 4</math></div>
<b>8. Lowest Common Multiple (LCM)</b>	The smallest number that is a multiple of at least two numbers. E.g. <i>Find the LCM of 8 and 12</i> <i>Multiples of 8:</i> 8, 16, 24 ... <i>Multiples of 12:</i> 12, 24 ... <div style="text-align: right;"><math>LCM = 24</math></div>
<b>9. Prime</b>	A number with EXACTLY 2 factors. 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37 ...
<b>10. Product</b>	To find the product means to multiply. E.g. The product of 6 and 7 is 42.

**Fractions****Addition & Subtraction**

$$\frac{3}{5} \times 4 + \frac{1}{4} \times 5 = \frac{12}{20} + \frac{5}{20}$$

Convert fractions to have a common denominator

The common denominator is the LCM of the two denominators

$$= \frac{17}{20}$$

**Multiplication**

$$\frac{3}{5} \times \frac{1}{4} = \frac{3 \times 1}{5 \times 4} = \frac{3}{20}$$

**Division**

This is called the reciprocal

$$\frac{3}{5} \div \frac{1}{4} = \frac{3}{5} \times \frac{4}{1} = \frac{3 \times 4}{5 \times 1} = \frac{12}{5}$$

Keep      Flip      Change

**Converting between****Mixed Numbers & Improper Fractions**

Mixed number to an improper fraction

$$2\frac{3}{5} = \frac{(2 \times 5) + 3}{5} = \frac{13}{5}$$

Improper fraction to mixed number

$$\frac{13}{5} = 13 \div 5 = 2 \text{ r } 3 = 2\frac{3}{5}$$

**Negative Numbers****Addition & Subtraction****Start**

The first number (including its sign)

**Direction**

+ ↑ - ↓

**Distance**

How many you move up or down the number line

$$2 + 3 = 5$$

2 ↑ 3

$$-2 - 3 = -5$$

-2 ↓ 3

$$2 - -3 = 5$$

2 ↑ 3

$$2 - 3 = -1$$

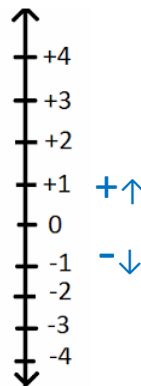
2 ↓ 3

$$-2 + 3 = 1$$

-2 ↑ 3

$$-2 - -3 = 1$$

-2 ↑ 3

**Multiplication & Division**

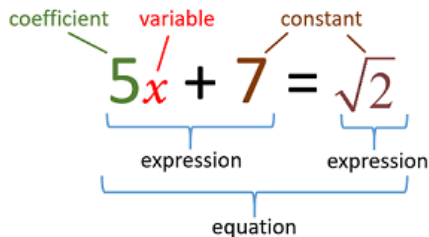
The same rules apply for division

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	$2 \times (-3) = -6$

### Algebra Rules:

Rule	Further Example
$a + a = 2a$	$10a + b - 3a + 4b = 7a + 5b$
$a \times b \times c = abc$	$5a \times 10d^2 = 50ad^2$
$a \times a = a^2$	$2a \times a \times 5a = 10a^3$
$a \div b = \frac{a}{b}$	We use the fraction line to represent division

### Algebra Key Words:



Terms:  $5x$ ,  $7$ ,  $\sqrt{2}$

A **formula** is a mathematical relationship or rule expressed in symbols.

For example:  $A = \pi r^2$  (area of a circle)

An **identity** is an equation that is always true, no matter what values are chosen.

For example:  $3a + 2a = 5a$

### Solving Equations:

We use **inverse operations** to do this.

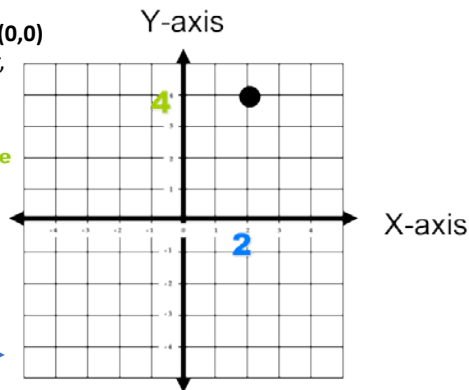
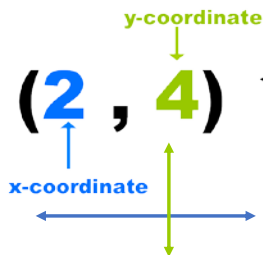
E.g. Solve:

Operation	Inverse
+	-
$\times$	$\div$
2	$\sqrt{\quad}$
3	$\sqrt[3]{\quad}$



$$\begin{aligned}
 10 &= \frac{3x - 4}{2} \\
 (\times 2) \quad (\times 2) & \\
 20 &= 3x - 4 \\
 (+4) \quad (+4) & \\
 24 &= 3x \\
 (\div 3) \quad (\div 3) & \\
 8 &= x
 \end{aligned}$$

### Co-ordinates:

Starting from the **origin (0,0)** we go along the corridor, then up or down the stairs.



**Year 8 Term 1 Music**  
**Blues Music**

	ELEMENT 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	 Flat	Lowering a note by a semitone, moving one step to the left, usually a black note.
6	 Sharp	Raising a note by a semitone moving a step to the right, usually a black note.

	Blues Term	Definition
7.	Walking bass	The bass part in blues that 'walks' up and down the notes of a chord.
8.	12-bar-structure	Traditional style of music using 3 chords over 12-bar cycle.
9.	Syncopation	When music is played on the off beat, not played on the main beat. 1 2 3 4
10.	Improvisation	Music that is made up on the spot by a performer based on notes around a chord
11.	Chord	3 or more notes played at the same time.
12.	Primary chord	The three major chords in a major scale i iv and v.
13.,	Blues scale	A collection of 6 specific music notes used to play the melodies and chords in blues music.
14.	Swing	The first beat is extended longer, stealing time from the second bit giving the rhythm a swing feel.
15.	Call and response	A question and answer structure where one performer plays a melody and the next copies or plays a different musical idea back.

### Art:

- ☐ To further develop my idea, I could...
- ☐ In my opinion...
- ☐ I have taken inspiration from...

### Maths:

- ☐ ... is incorrect because...
- ☐ Another way to work this out is...
- ☐ The mistake is that...

### 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...

### History:

- ☐ This links to my next point because...
- ☐ The source is a...
- ☐ The source was made in...

### 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 ....

### Technology:

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

### PE:

- ☐ This is a strength because...
- ☐ This is a weakness because...
- ☐ I conclude...

### Music:

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

### IT:

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

### 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...

### 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...

### EAL:

- ☐ I like... because...
- ☐ I don't like... because...
- ☐ I think...

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



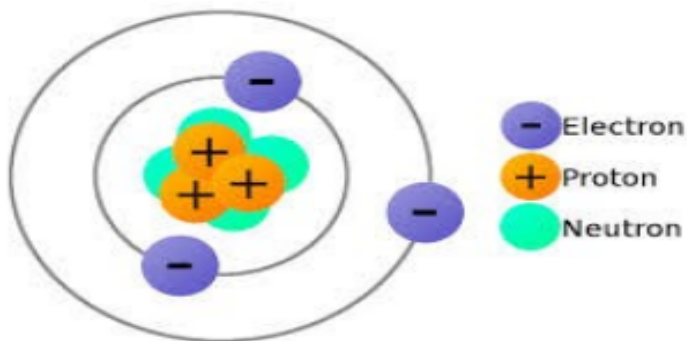
The beginnings of Judaism		
1	Abraham	The common founder of Judaism, Christianity and Islam.
2	Covenant	Conditional promises made to humanity by God.
3	Sacrifice	An act of slaughtering an animal or person or surrendering a possession as an offering to a deity.
4	Isaac	Abraham's son who went on to be 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.

## Atoms and the Periodic Table

	Key word	Definition
1	Element	A substance that is made up of only one type of atom.
2	Molecules	Small groups of atoms.
3	Periodic table	A list of the elements.
4	Proton	Subatomic particle in the nucleus with a positive charge and mass of 1.
5	Neutron	Subatomic particle in the nucleus with no charge and a mass of 1.
6	Electron	Subatomic particle outside the nucleus in shells with a negative charge and a mass of almost 0.





First Twenty Elements				
1 H Hydrogen	2 He Helium	3 Li Lithium	4 Be Beryllium	5 B Boron
6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
11 Na Sodium	12 Mg Magnesium	13 Al Aluminium	14 Si Silicon	15 P Phosphorus
16 S Sulfur	17 Cl Chlorine	18 Ar Argon	19 K Potassium	20 Ca Calcium

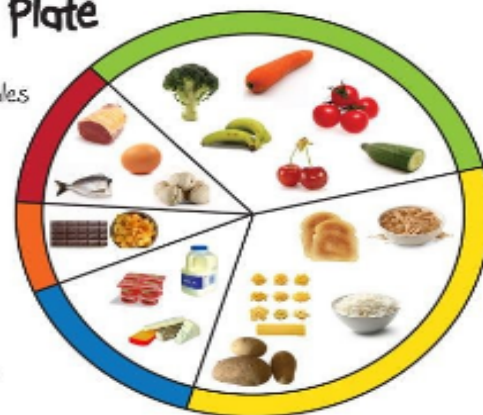




Nutrition and Digestion		
	Key word	Definition
1	Balanced diet	A diet in which all components needed to maintain health are present in appropriate proportions.
2	Nutrients	A substance that provides nourishment essential for the maintenance of life and for growth.
3	Disease	A disorder of structure or function in a human, animal, or plant, especially one that produces specific symptoms or that affects a specific location and is not simply a direct result of physical injury.

### A Balanced plate

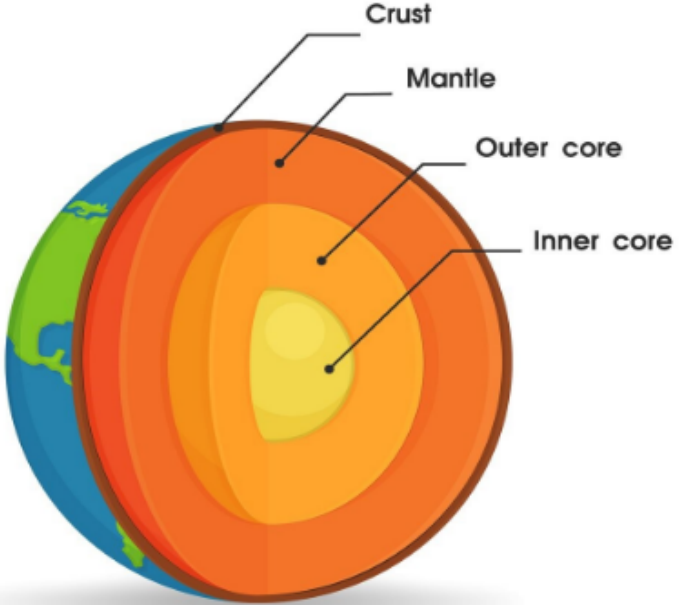
-  Fruit and vegetables
-  Grains, cereals and potatoes
-  Dairy products
-  Meat, fish, nuts and eggs
-  Fats and sugars



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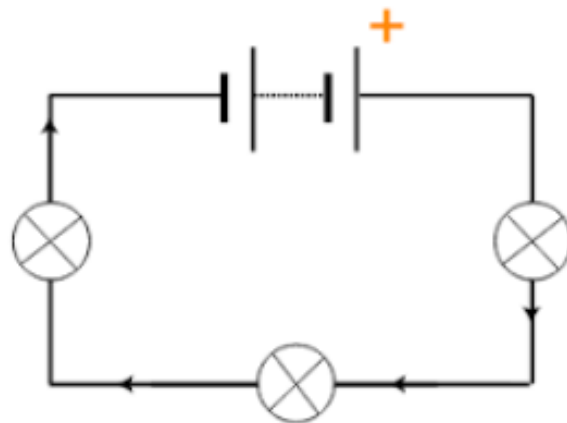
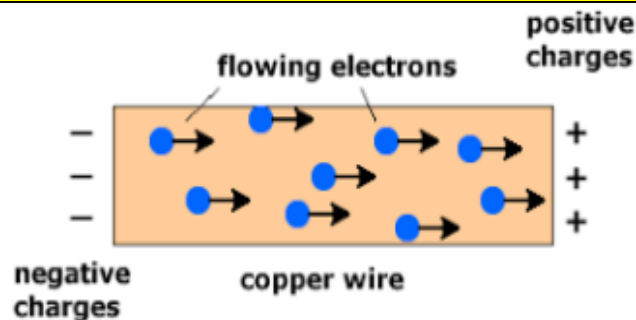
4	Obesity	Too many calories for energy expenditure. Very overweight, arthritis in joints, type 2 diabetes.
5	Energy	Energy is released from the food we've eaten during a chemical reaction called respiration. Our cells preferred 'fuel' is glucose.
6	Digestion	This is the process of converting large insoluble food molecules into smaller insoluble ones.


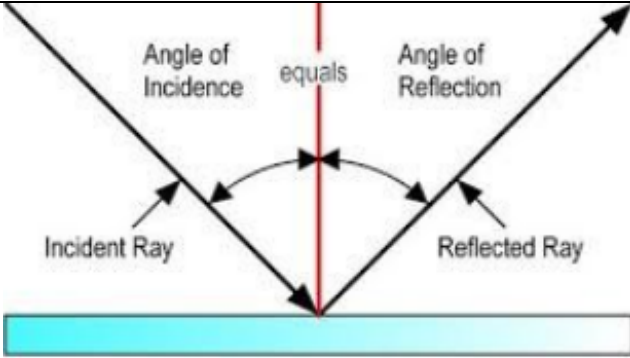


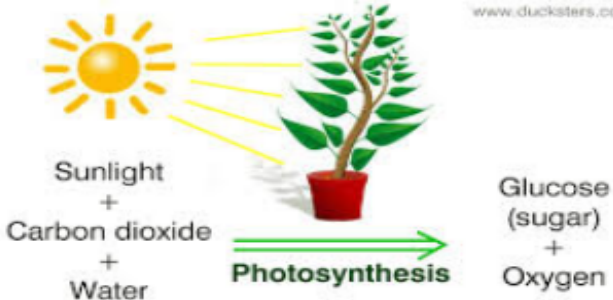
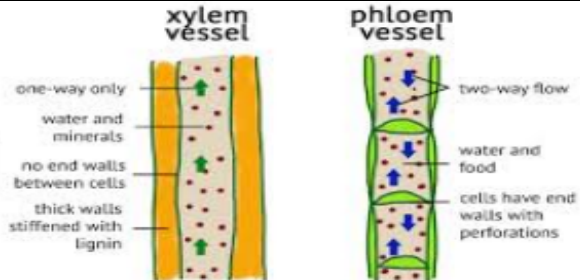
The Earth and Materials			
	Key word	Definition	
1	Atmosphere	The atmosphere is the blanket of gases which surrounds Earth. It is held near the surface of the planet by Earth's gravitational attraction.	
2	Earth	The planet on which we live made up largely of iron, nickel and molten rock.	
3	Crude Oil	Crude oil is a finite resource. Petrol and other fuels are produced from it using fractional distillation. Cracking is used to convert long alkanes into shorter, more useful hydrocarbons.	



4	Earthquake	An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics).	
5	Tectonic Plates	A tectonic plate (also called lithospheric plate) is a massive, irregularly shaped slab of solid rock, generally composed of both continental and oceanic lithosphere. ... Continental crust is composed of granitic rocks which are made up of relatively lightweight minerals such as quartz and feldspar.	
6	Rocks	The solid mineral material forming part of the surface of the earth and other similar planets, exposed on the surface or underlying the soil.	

Electricity		
	Key word	Definition
1	Energy	In physics, energy is the quantitative property that must be transferred to an object in order to perform work on, or to heat an object.
2	Electrical charge	The physical property of matter that causes it to experience a force when placed in an electromagnetic field.
3	Current	The rate of flow of an electrical charge.
4	Series circuit	A circuit in which resistors are arranged in a chain so the current has only one path to take. The current is the same through each resistor.
5	Parallel Circuit	This circuit has two or more paths for the current to flow through. Voltage is the same across each component of the parallel circuit.
6	Voltage	Potential difference expressed in volts.



	Light		
	Key word	Definition	
1	Luminous	Objects that produce their own light.	
2	Non-luminous	Objects that do not produce their own light. We see them because light reflects off them into our eyes.	
3	Transparent	Allowing light to pass through so that objects behind can be distinctly seen.	
4	Reflected light	Reflected light travels in the same direction. This is called specular reflection.	
5	Angle of reflection	The angle between the reflected ray and the normal ray.	
6	Angle of Incidence	The angle between the incident ray and the normal ray.	

Photosynthesis			
	Key word	Definition	
1	Photosynthesis	A chemical reaction that takes place in the chloroplasts of green plant cells, where light energy is used to convert carbon dioxide and water into glucose and oxygen.	 <p>Sunlight + Carbon dioxide + Water</p> <p><b>Photosynthesis</b></p> <p>Glucose (sugar) + Oxygen</p>
2	Starch	A natural polymer. Much of the glucose made is turned into starch.	
3	Light intensity	The rate of photosynthesis is affected by light intensity.	
4	Leaf	A broad and flat structure used to capture lots of sunlight.	 <p><b>xylem vessel</b></p> <p>one-way only</p> <p>water and minerals</p> <p>no end walls between cells</p> <p>thick walls stiffened with lignin</p> <p><b>phloem vessel</b></p> <p>two-way flow</p> <p>water and food</p> <p>cells have end walls with perforations</p>
5	Xylem	Moves water from the roots to the leaves.	
6	Phloem	Carries glucose from the leaves all around the plant.	

Matter			
	Key word	Definition	
1	States of matter	Solids, liquids and gases are called the three states of matter.	
2	Pressure	How much force is exerted over a certain area. $\text{Pressure} = \frac{\text{force}}{\text{area}}$	
3	Upthrust	When an object is placed in a fluid, the pressure of that fluid will cause a force on the object, pushing the object upwards. This force is called upthrust.	
4	Density	Density refers to how much mass an object has per unit of volume.	
5	Change of state	This refers to a state changing from e.g. solid to liquid or liquid to gas. Examples include melting, freezing, condensation, evaporation and sublimation.	
6	Atmospheric pressure	Atmospheric pressure, also known as barometric pressure (after the barometer), is the pressure within the atmosphere of Earth.	



Working Scientifically																																			
	Key word	Definition																																	
1	Variables	During science investigations we have independent variables, which are what we change. We have dependent variables, which we measure and control variables which must be kept the same to ensure results are valid.	<table><tr><th>Mass (g)</th><th>Extension 1 (mm)</th><th>Extension 2 (mm)</th><th>Average Extension (g)</th></tr><tr><td>0</td><td>0</td><td>1</td><td>0.5</td></tr><tr><td>100</td><td>5</td><td>6</td><td>5.5</td></tr><tr><td>200</td><td>9</td><td>9</td><td>9</td></tr><tr><td>300</td><td>15</td><td>15</td><td>15</td></tr><tr><td>400</td><td>20</td><td>21</td><td>20.5</td></tr><tr><td>500</td><td>24</td><td>25</td><td>24.5</td></tr><tr><td>600</td><td>30</td><td>31</td><td>30.5</td></tr></table>	Mass (g)	Extension 1 (mm)	Extension 2 (mm)	Average Extension (g)	0	0	1	0.5	100	5	6	5.5	200	9	9	9	300	15	15	15	400	20	21	20.5	500	24	25	24.5	600	30	31	30.5
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400	20	21		20.5																															
500	24	25		24.5																															
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2	Table	A table is a visual representation showing the relationship between the relationship between the independent and dependent variable.																																	
3	Graph	This is a visual representation of data which allows patterns (trends) to be seen more easily.																																	
4	Hypothesis	This is an educated guess of what may be predicted for a scientific experiment. This occurs before any testing has taken place.																																	
5	Evaluation	This is where the pros and cons of something are listed and a decision is made based on these.																																	
6	Risk Assessment	A risk assessment is completed to spot the potential hazards in an investigation and the likelihood of these taking place.																																	
			<div><h1>Lab Safety</h1><table><tr><td></td><td>don't touch the animals</td></tr><tr><td></td><td>wear safety goggles</td></tr><tr><td></td><td>wear lab coat</td></tr></table></div>		don't touch the animals		wear safety goggles		wear lab coat																										
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