



# Year 8 Knowledge Organiser

Knowledge is Power

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# English

## Devices

	Device	Example
<b>D</b>	Direct Address	Using pronouns to address the reader directly.
<b>A</b>	Alliteration	When a series of three or more words begin with the same sound.
<b>F</b>	Facts	Something that is proven to be true and can be used as evidence.
<b>O</b>	Opinions	Information that a person believes in. It is a view or judgement formed about something, not necessarily based on fact or knowledge.
<b>R</b>	Rhetorical Questions	A question that is unanswered and is used to make a point.
<b>E</b>	Emotive Language	Language used to evoke an emotional response from the reader.
<b>S</b>	Statistics	The collection, analysis, interpretation, and presentation of numerical data.
<b>T</b>	Triples (Rule of three)	Use three related words or phrases to grab attention, encapsulate, summarize. This can be three single words, three phrases or three complete sentences

## Key Terms

Transactional Writing	writing to communicate something specific to a specific audience for a specific purpose. These are non-fictional texts.
Refugee	a person who has been forced to leave their country in order to escape war, persecution, or natural disaster.
FIT	Feel, Imagine, Think
TAP	Type of Text, Audience, Purpose

## Speech

Text type	Features
Speech	<ul style="list-style-type: none"> <li>A final address to an audience</li> <li>A clear address to an audience</li> <li>Effective/ fluently linked section to indicate sequence</li> <li>Rhetorical indicators that an audience is being addressed throughout</li> <li>A clear sign off e.g. 'Thank you for listening'</li> </ul>

## Letter

Text type	Features
Letter	<ul style="list-style-type: none"> <li>The use of addresses: an indication that someone is sending the letter to someone</li> <li>Paragraphs</li> <li>A date</li> <li>A formal more of address if required e.g. Dear Sir/Madam or a named recipient</li> <li>Effectively/ fluently sequenced paragraphs</li> <li>An appropriate more of signing off: Yours sincerely/ faithfully</li> </ul>

## Article

Text type	Features
Article	<ul style="list-style-type: none"> <li>Paragraphs</li> <li>A clear/ original title</li> <li>A strapline</li> <li>Subheadings</li> <li>An introductory (overview paragraph)</li> <li>Effectively/ fluently sequenced paragraphs</li> </ul>

Key Word	Definition
Factor	A number that divides another number exactly
Multiple	A number which is part of another number's times table
HCF	Highest Common Factor. It is the largest factor common to a set of numbers
LCM	Lowest Common Multiple'. It is the smallest multiple common to a set of numbers
BIDMAS	Tells us the order of operations: Brackets, Indices, Division, Multiplication, Addition, Subtraction
Integer	A whole number
Product	Multiply
Prime number	A number which has exactly two factors. The number one and itself
The first 13 Prime numbers	2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41

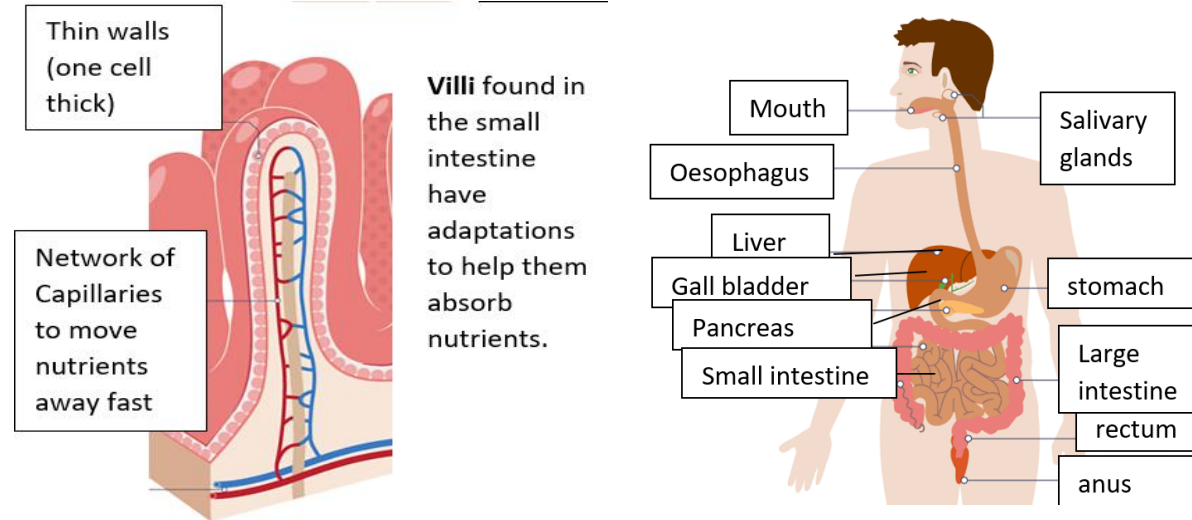
Key Word	Definition
Regular shape	All sides and angles are equal
Irregular shape	Sides and angles are not equal
Vertices	Points where two edges meet (like a corner)
Triangle	3 sides, 3 vertices
Quadrilateral	4 sides, 4 vertices
Pentagon	5 sides, 5 vertices
Hexagon	6 sides, 6 vertices
Heptagon	7 sides, 7 vertices
Octagon	8 sides, 8 vertices
Nonagon	9 sides, 9 vertices
Decagon	10 sides, 10 vertices
Hendecagon	11 sides, 11 vertices
Dodecagon	12 sides, 12 vertices

Key Word	Definition
Mode	Most frequent number
Median	The 'middle value' when numbers are in order.
Mean	Found by adding all numbers together and then dividing that by the number of numbers.
Range	The difference between the highest and lowest values.
Discrete Data	Data that can only take certain values. These values do not have to be whole numbers, but they are fixed values..
Continuous Data	Data that can take any value e.g. height, weight, temperature, length.
Grouped Data	Data grouped together into categories (class intervals)
Class interval	When data is collected and arranged in a class, and the width of this class is known as the class interval.

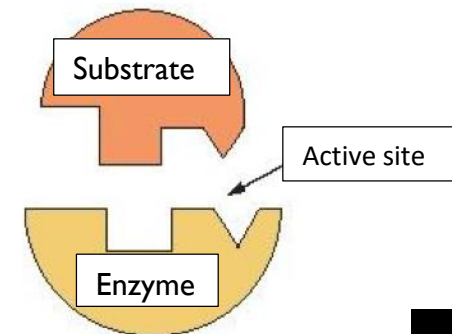
# Science

Key Word	Definition
Digestion	The breakdown of large insoluble food molecules into smaller soluble ones
Absorbed	When a substance is taken in by something or moved across a barrier such as a cell membrane
Enzyme	A protein which speeds up a chemical reaction
Amylase	An enzyme that breaks down starch into glucose
Lipase	An enzyme which breaks down lipids (fats and oils)
Protease	An enzyme which breaks down protein into amino acids
Surface Area	The surface of an organism or membrane
Villi	Finger-like projections in the small intestine that provide a large surface area
Capillary	Tiny blood vessels with walls one cell thick where exchange of materials occurs
Bile	Substance produced by the liver, which makes fat turn into droplets of fat increasing their surface area for breakdown by lipase
Pancreas	Produces the majority of the enzymes used in digestion
Excretion	Process by which waste products from chemical reactions in an organism are removed

Organ	Function
Oesophagus	Also known as the gullet. Connects the mouth to the stomach using contractions of muscles
Liver	Production of bile
Stomach	Churns and mixes the food with hydrochloric acid and protease
Pancreas	Produces enzymes for digestion
Small intestine	The last stage of digestion, all digested food must be absorbed into the bloodstream from here
Large intestine	Absorption of excess water
Rectum	Storage of faeces (undigested material)
Anus	Where faeces is excreted (removed from the body)



Enzyme	Substrate	Product
Carbohydrase	Carbohydrate	Simple sugar (glucose)
Amylase	Starch	Simple sugar (glucose)
Protease	Protein	Amino acids
Lipase	Fat (Lipid)	Fatty acids and glycerol



# Science Skills

## Types of Variable

**Independent** – the variable that is changed

**Dependent** – the variable that is measured

**Control** – the variables that stay the same

## Calculating Uncertainty

### Step 1. Find the range

Biggest number – smallest number

e.g. 4.2, 3.3, 3.1

the range is  $4.2 - 3.1 = 1.1$

### Step 2. Divide by 2

$1.1 / 2 = 0.55$

Step 3: Add  $\pm$  symbols before the value e.g.  $\pm 0.55$

## Types of Error

**Systematic** – a problem with the method or equipment used. E.g. using a beaker to measure the volume of a liquid instead of a measuring cylinder.

The effect cannot be reduced by taking repeat readings.

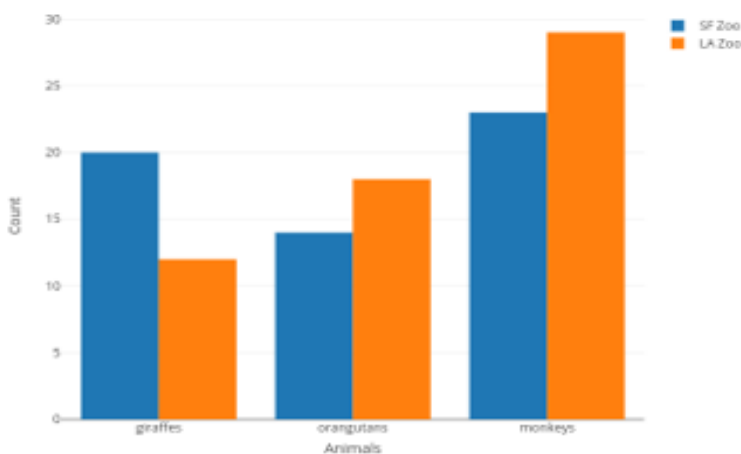
**Random** – whenever something is measured a random error is made. E.g. measuring with a ruler.

The effect can be reduced by taking repeat readings.

**Zero** – caused by a piece of equipment not reading zero when it should. E.g. a balance. Either reset the piece of equipment or deduct the false reading from all measurements.

## Bar Chart

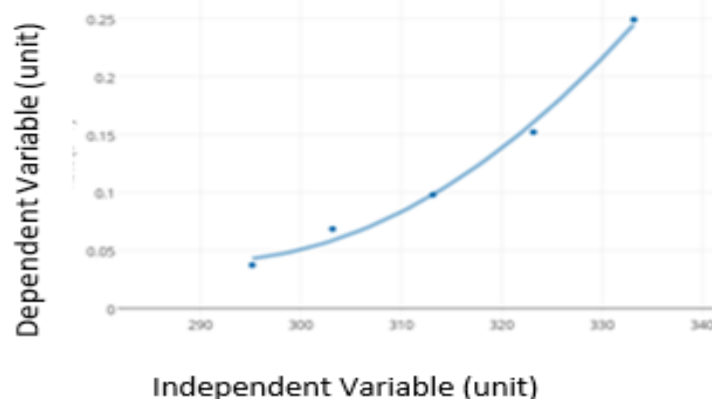
Type of graph plotted for one piece of **categorical** data and one piece of **continuous** data



## Scatter Graph

Type of graph plotted for two pieces of **continuous** data

Has a **line of best fit**. This may be a **straight line** or a **curve** (not join the dots)



## Key words

**Accurate** – close to the true value

**Anomalous** – a result that doesn't fit the pattern

**Precise** – small amount of spread around the mean

**Resolution** – the smallest reading on a piece of measuring equipment

**Reproducible** – if the same results are obtained by different people for the same investigation

**Range** – the biggest and smallest values of the independent or dependent variable e.g. 0-10 N

**Volume** – amount of a liquid

# History

		Key Information	
		What was the Industrial Revolution?	Why did Britain industrialise first?
Industrial Revolution	A time of great change in Britain when people started to make things by machine in factories. It spans from 1750 to 1900.	Industrial Revolution was the process of change from an agrarian and handicraft economy to one dominated by industry and machine manufacturing. This process began in Britain in the 18th century and from there spread to other parts of the world.	The Industrial Revolution began first in Britain in the 1700s. Historians have identified several reasons for why the Industrial Revolution began first in Britain, including: the effects of the Agricultural Revolution, large supplies of coal, geography of the country, a positive political climate, and a vast colonial empire.
Urban	Built-up areas in which people live in close proximity. This refers to either towns or cities.		
Rural	Countryside areas in which the population is spread thinly.		
Invention	Something new which is created, can be an idea or an object.		
Workhouse	An institution which would house and look after the poor. In return for food and lodging inmates would be expected to work to produce goods.	<b>Conditions during the Industrial Revolution</b>	
Cholera	An infectious and often fatal bacterial disease of the small intestine typically contracted from infected water supplies and causing severe vomiting and diarrhoea.	<b>Living Conditions</b>	<b>Working Conditions</b>
Industrial	Processing raw materials or manufacturing goods in factories.	<p><b>Pollution:</b> coal was used more than ever during the Revolution. The burning of coal created smoke, which led to terrible pollution in the cities.</p> <p><b>Overcrowding:</b> due to large numbers of people moving to the cities, there were not enough houses for all these people to live in. Sometimes whole families lived in one room.</p> <p><b>Disease:</b> typhus, typhoid, tuberculosis and cholera all existed in the cities of England. Overcrowding, housing of a low standard and poor quality water supplies all helped spread disease.</p>	<p><b>Long working hours:</b> normal shifts were usually 12-14 hours a day, with extra time required during busy periods.</p> <p><b>Low wages:</b> a typical wage for male workers was about 15 shillings (75p) a week, but women earned seven shillings (35p) and children three shillings (15p).</p> <p><b>Cruel discipline:</b> there was frequent "strapping". Other punishments included hanging iron weights around children's necks, hanging them from the roof in baskets, nailing children's ears to the table, and dowsing them in water to keep them awake.</p>
Manufacture	Making something on a large scale.		
Entrepreneur	Someone who sets up a business hoping to make profit.		
Laissez faire	Meaning 'leave well alone'. The attitude of the rich to the poor and the Government towards working conditions in factories.		
Destitute	To be extremely poor and not able to support yourself.	<b>Inventions</b>	
Black Gold	Coal. Coal became such a profitable industry, that many started calling it black gold.	The Flying Shuttle – John Kay, 1733 The Water Frame – Richard Arkwright, 1769 The Power Loom – Edmund Cartwright, 1785	The Spinning Jenny – James Hargreaves, 1764 The Spinning Mule – Samuel Crompton, 1779
Pauper Apprentice	Orphaned children who would be sent to work in factories to keep them off the streets.	<b>The Transport Revolution</b>	
Smog	Air pollution that reduces visibility. The term was first used in the early 1900s to describe a mix of smoke and fog. The smoke usually came from burning coal.	As production and demand for British goods sky rocketed and more people lived and worked in towns, Britain experienced a transport revolution.	By 1830 there were over 32,000km of roads, every major city was connected by over 6400km of canal, and by 1901 32,000km of train track carried millions of passengers every year.
Textile	A flexible material made by creating an interlocking network of yarns or threads, which are produced by spinning raw fibres into long and twisted lengths.		



Key Word	Definition
Weather	The short term day to day conditions in the atmosphere over a small/local area.
Climate	The weather conditions measured over a large region across an average of 30 years.
Precipitation	Water in any form that falls to Earth (rain, snow, sleet, hail).
Temperature	Measurement of how hot or cold.
Relief rainfall	Rain being caused to rise over hills and mountains.
Frontal rainfall	When warm air has to rise over cold air to cause rain.
Convictional rainfall	Rain that is produced when air rises after being heated and evaporated.
Latitude	A measurement of distance north or south of the equator, which has a latitude of 0° .
Altitude	Height above sea level, normally measured in meters.
Ocean Currents	A continuous, directed movement of ocean water that flows in Earth's oceans.
Air pressure	The weight of the air in the atmosphere pushing down to Earth.
Low pressure	Caused by air rising.
High pressure	Caused by sinking air.
Microclimate	A very small area which has different weather conditions to the area as a whole.
Tropical storm	A low pressure wind system formed over warm ocean water.
Drought	A long period of time with little to no rainfall, causing water shortages.
Extreme weather	Weather that is unseasonal, unusual or severe.



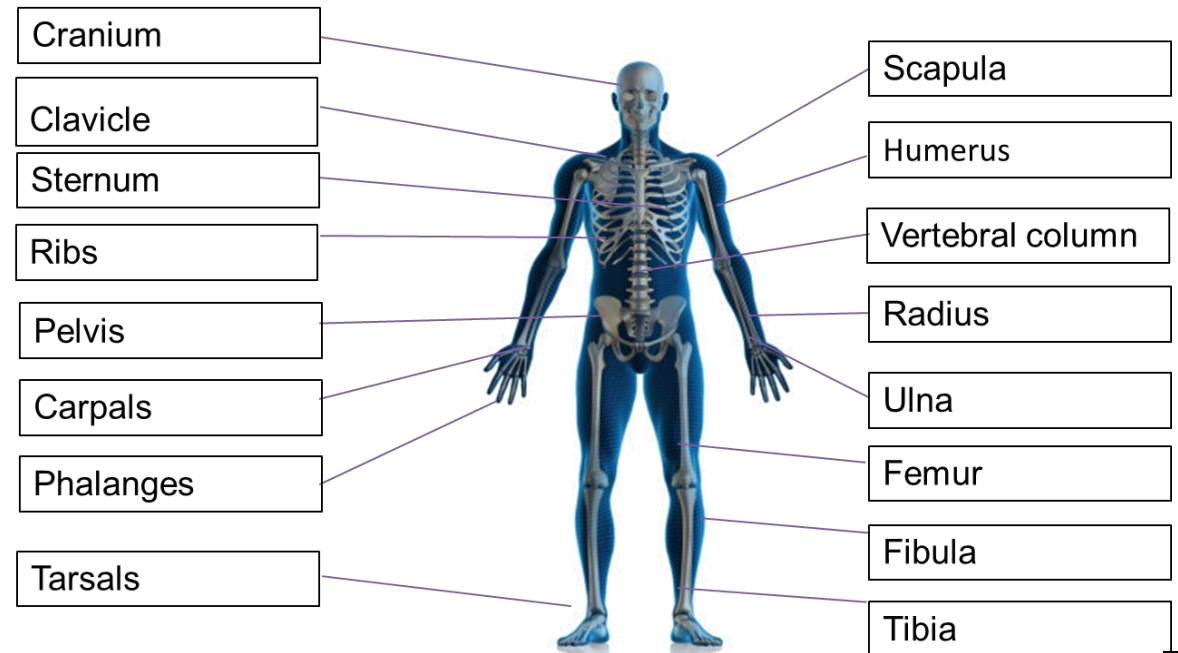
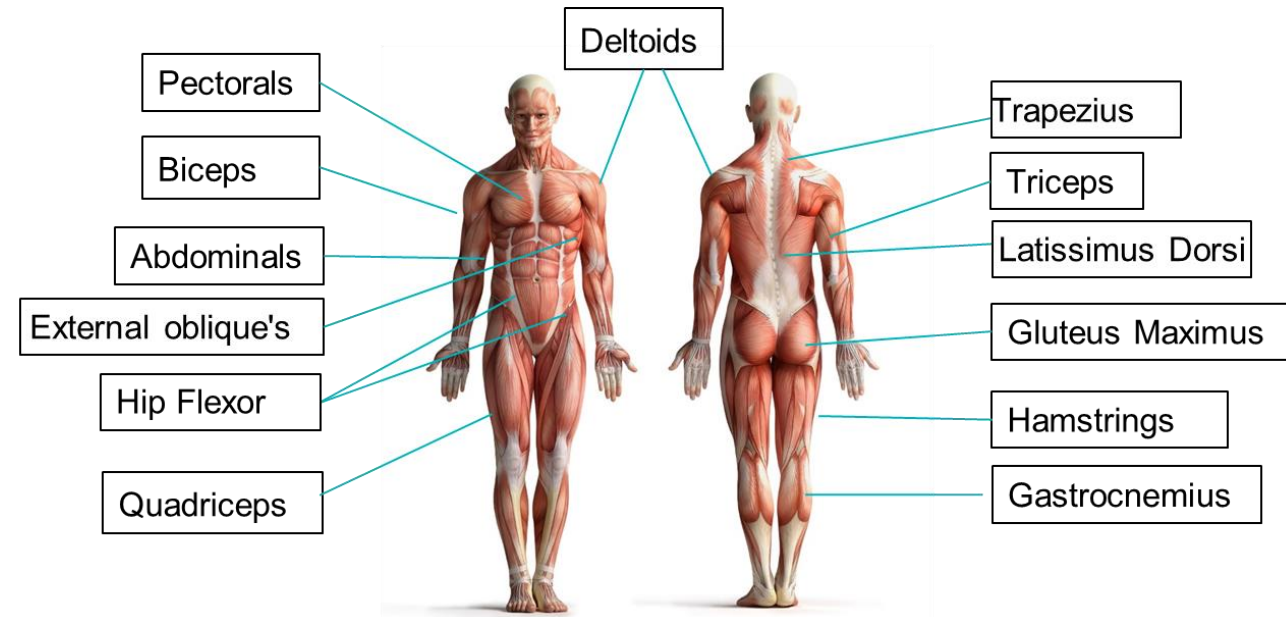
Spanish	English
¿Adónde fuiste de vacaciones?	Where did you go on holiday?
el año pasado	last year
el verano pasado	last summer
Fui a...	I went to...
España/Francia/Gales/Grecia/Inglaterra/Irlanda/Italia	Spain/France/Wales/Greece/England/Ireland/Italy
¿Con quién fuiste?	Who did you go with?
Fui con...	I went with...
Mis amigos/as	my friends
mi clase	my class
mi familia	my family
mis padres	my parents
¿Cómo fuiste?	How did you get there?
Fui/Fuimos en..	I/We went by...
autocar	coach
avión	plane
barco	boat/ferry
coche	car
tren	train

Spanish	English
No fui de vacaciones.	I didn't go on holiday.
¡Qué bien!	How great!
¡Qué divertido!	What fun!/How funny!
¡Qué guay!	How cool!
¡Qué rico!	How delicious!/How tasty!
¡Qué suerte!	What luck!/How lucky!
¡Qué aburrido!	How boring!
¡Qué lástima!	What a shame!
¡Qué rollo!	How annoying!
¡Qué bonito!	How pretty!
¡Qué horror!	How dreadful!
Bailé.	I danced.
Compré una camiseta.	I bought a T-shirt.
Descansé en la playa.	I relaxed on the beach.
Mandé SMS.	I sent texts.
Monté en bicicleta.	I rode my bike.
Nadé en el mar.	I swam in the sea.
Saqué fotos.	I took photos.

Spanish	English
Tomé el sol.	I sunbathed.
Visité monumentos.	I visited monuments.
No nadé en el mar.	I didn't swim in the sea.
Bebí una limonada.	I drank a lemonade.
Comí paella.	I ate paella.
Conocí a un chico/a guapo/a.	I met a good-looking/attractive boy/girl.
Escribí SMS.	I wrote texts.
Salí con mi hermano/a.	I went out with my brother/sister.
Vi un castillo interesante.	I saw an interesting castle.
¿Cómo te fue?	How was it?
Fue divertido.	It was fun/funny.
Fue estupendo.	It was brilliant.

Spanish	English
Fue fenomenal	It was fantastic.
Fue flipante	It was awesome.
Fue genial.	It was great.
Fue guay.	It was cool.
Fue un desastre.	It was a disaster.
Fue raro.	It was weird.
Fue regular.	It was OK.
Fue horrible.	It was horrible.
Fue horroroso	It was terrible.
Me gustó	I liked it
Me encantó	I loved it

Key Word	Definition
Muscular system	Works in conjunction with the skeleton to produce movement of the limbs and body
Antagonistic pairs	Muscles are arranged in antagonistic pairs. As one contracts, its partner relaxes
Agonist	The muscle that contracts to produce movement
Antagonist	The muscle that relaxes to allow the movement to occur
Skeleton	Is the central structure of the body



## Melodrama

Melodrama is a style of theatre that was prominent in the Victorian era. The story or play usually included lots of exciting or sad events and in which people's emotions are very exaggerated.

Melodrama = Music (Melody) + Acting (Drama)

### Characteristics of Melodrama

- ✓ Exaggerated style of acting
- ✓ Use of stock characters
- ✓ Exaggerated conflicts
- ✓ Highly Emotional



## Stock Characters

Stock characters are a form of stereotype, which we expect to see in a particular style of drama. Their appearance, behaviour and speech is predictable. In melodrama, we would expect to see, for example, the Maiden, the Hero and the Villain, and we would be able to identify them easily from their actions and appearance.

## **Drama Skills**

Key Word	Definition
Body Language	How an actor uses their body to communicate meaning. For example, crossing your arms could mean you are fed up
Tone	The way you say something in order to communicate your emotions. (E.g. Angry, worried, shocked tone of voice)
Character	The person/persona an actor wishes to convey.
Posture	The position an actor holds their body when sitting or standing. For example, an upright posture.
Heightened acting style	An exaggerated and over the top way of acting

## **Drama Techniques**

Key Word	Definition
Montage	A montage is a series of short self-contained scenes grouped immediately after each other
Narrator	The person who helps to tell the story or moral of the piece.
Direct Address	When you speak directly to the audience 'in role'.
Stock characters	The term given to the stereotypical characters in Melodrama
Hot Seating	A character is questioned by the group about his or her background, behaviour and motivation. The method may be used for developing a role
Genre	A type of performance that can be defined by specific key features and audience response
Cliff hanger	A cliff hanger is a situation or part of a play or movie that is very exciting or frightening because you are left for a long time not knowing what will happen next.

# Computing

Key Word	Definition
E-mail scams	A deceptive way of getting you to part with money or trick you in to something you wouldn't usually do. May also damage your computer and files.
Phishing	Tricks you into handing over sensitive details, such as security log-in details.
Virus generated	Opening it can generate a similar email to be sent to all your email contacts. Can contain a forged link, can contain a request for cash.
Advanced fee fraud	Usually accompanied by a long, emotional plea, promises a large sum of money in return for a small advanced fee.
Trojan horse/malware	Offers you something tempting to look at – like a funny video – and installs malware on your device

## Data Protection (GDPR)

Data about you must be accurate and up to date

You have a right to see this data if you so wish

The data must be physically locked away or protected by passwords/encryption

The data can only be held for as long as necessary by the organisation. After that it must be destroyed.

## Copyright and Plagiarism

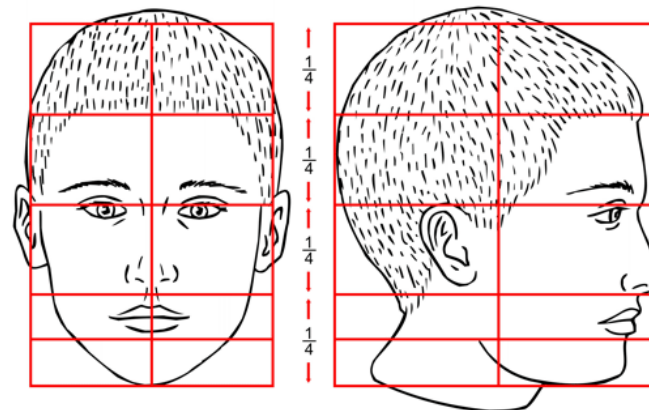
Copyright	© Protects the rights of an author/creator of creative work. It means that someone else's work cannot be copied without permission.
Plagiarism	Is using someone else's creative work as if it is yours. This is not allowed.
Copyrighted material	online can be music, films or pictures. Sharing or downloading these illegally (without paying the owner of the copyright) is a copyright infringement. However, there are many sites, like amazon music or iTunes, where downloading music is legal because the owner has been paid.
Downloading media content	It is estimated that the illegal downloading of films, TV programmes and music could mean the loss of 30,000 British jobs

## Passwords

Should always include at least 1 uppercase letter, 1 lowercase letter, 1 number AND a special character: \*pa\$\$WorD\_2070 Don't include personal information Make it at least 8 characters long

Weak passwords are one of the most common weaknesses exploited by hackers!

Key Word	Definition
Line	An element of art defined by a point moving in space. Line may be two-or three-dimensional, descriptive, implied, or abstract
Shape	An element of art that is two-dimensional, flat, or limited to height and width.
Form	An element of art that is three-dimensional and encloses volume; includes height, width AND depth (as in a cube, a sphere, a pyramid, or a cylinder). Form may also be free flowing
Self portrait	A portrait an artist makes using himself or herself as its subject, typically drawn or painted from a reflection in a mirror.
Tone	The particular quality of brightness, deepness, or hue of a shade of a colour
Space	An element of art that refers to the distance or area between, around, above, below, or within things. It can be described as two-dimensional or three-dimensional; as flat, shallow, or deep; as open or closed; as positive or negative; and as actual, ambiguous, or illusory.
Proportion	The correct, attractive, or ideal relationship between one thing and another or between the parts of a whole
Golden Ratio Art	The golden ratio is <b>a method that you can use to divide lines and rectangles in an aesthetically pleasing way</b> . Architects use a very accurate golden ratio number, 0.62, when designing buildings. As an easier rule of thumb for your art, you can use a ratio of 3 to 5
Profile	The side view of an object or person
Full face	The head-on view of a person or object.



Key Word	Definition
Sample	A sample is an example of a textile technique you have tried.
Applique	Sewing smaller pieces of fabric onto a larger piece to create a picture or pattern.
Felting	Rubbing wool fibers together to create a piece of felt with a picture or pattern in.
Texture	How an object looks or feels. An example of texture in textiles is the smooth feeling of satin.
Batik	Dyeing a piece of fabric after first applying a wax resist pattern or picture.
Soft sculpture	Making 3D objects using fabric.
Backstitch	a stitch sewn one stitch length backward on the front side and two stitch lengths forward on the reverse side to form a solid line of stitching on both sides.
Sustainable Fashion	Sustainable fashion is a way in which brands create clothing that not only reduces the impact on the environment but is also mindful of the people who work to produce the garments.
Presser Foot	A presser foot is an attachment used with sewing machines to hold fabric flat as it is fed through the machine and stitched.
Sewing Thread	Sewing thread is the yarn used to combine two or more fabric pieces together in garments, accessories, and other textile products



# Cooking and Nutrition

Key Word	Definition
Hazard	Anything that is dangerous
Kitchen Hygiene	Ensuring that everything is clean when preparing food
Kitchen Safety	Being safe in the kitchen
Cross contamination	Transfer of bacteria from one person, object or place to another
Eat Well Guide	A pictorial food guide showing the amounts and types of foods that are needed to make up a healthy balanced diet
Claw grip	A method of cutting food that ensures that the finger tips are tucked out of the way and will not get caught by the knife
Pastry	A dough made with flour, water and fat
Nutrients	Chemicals found in food that are needed for body functions
Macro-nutrients	Nutrients that are needed in the body in large amounts
Micro-nutrients	Nutrients that are needed in the body in small amounts
Yeast	A micro-organism used as a raising agent in bread making
Bridge Hold	A method of cutting food that ensures that fingers are out of the way as the knife cuts through the food

Key Word	Definition
Bass clef	A symbol used at the beginning of the staff to let the musician know that the notes are written in the bass clef
Bass	Low pitched sounds
Good Boys Deserve Football Always	The mnemonic used to remember the notes on the lines in bass clef
All Cows Eat Grass	The mnemonic used to remember the notes in the spaces in bass clef
Riff	A repeated pattern, usually catchy, used in popular music. Often played on the bass guitar or keyboard
Alberti Bass	A pattern played in the left hand on the Piano which was popular in the classical period. The notes of the chord are played in this order; 1 5 3 5
Walking Bass	A bass line used in Jazz/Blues music played on a bass guitar or an upright bass. There is a note played on each beat of the bar—never stopping
Plucked/Pizzicato	When an instrument with strings is played using the fingers instead of a bow. Walking bass lines are most often played using this technique