

Knowledge Organiser

YEAR

8



“Each day is a new beginning, I know that the only way to live my life is to try to do what is right, to take the long view, to give of my best in all that the day brings.”

- Queen Elizabeth II

Knowledge Organisers at Redmoor Academy

WHY?

Why do we have knowledge organisers?

Your knowledge organisers help you to be successful in many ways. Firstly, they make clear the key elements needed in a topic to have an excellent understanding of it. If you know these elements, your teacher will help you to understand them.

WHAT?

What are my teachers' expectations of me?

In year 7 and 8 your teachers will give you homework that means you will be spending 20 minutes a week learning information from your knowledge organiser for each subject. In year 9 this will be 30-40 minutes. Teachers will test you once a week to make sure that you are completing the homework and remembering your knowledge. Your knowledge organiser exercise book is where you will complete your practising. Each time you revise and practise, you should put the subject as the title and the date. Rule off when you have completed your revising for that subject. Teachers and form tutors will be regularly checking that you are revising.

HOW?

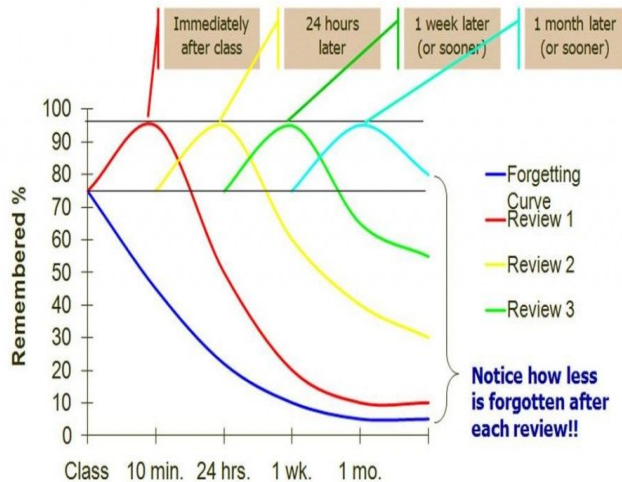
How will my teachers use them?

Each subject will set homework once a week that will help you to learn your knowledge organiser. They will also test you once a week on certain parts to see how well you have remembered it. Research tells us that this practising is a really good way of helping you make sure that the knowledge stays in your memory. Over time you will build on this knowledge to make sure that you know everything you need to for your subject. Sometimes you may have high stakes quizzes, where teachers will set a certain score that you have to reach to be successful.

How will they help me revise?

When it comes to GCSEs, you have lots of information to remember. Your knowledge organisers will gradually build up this knowledge over 5 years to help support you in year 11 so that when you revise, you are just recalling knowledge that you have already stored. Also, you will have practised lots of revision techniques whilst revising your knowledge organisers over the past 5 years, which will help prepare you for the final exams.

How we learn at Redmoor



Why reviewing your learning is so important

As soon as we are told a new piece of information, most of that information is 'lost' and forgotten. Hermann Ebbinghaus found that repeating information helps us remember more of it. So we need to be reviewing and going over what we learn in order for us to remember and be able to use the information after a period of time has passed.

This resource summarises some proven strategies that you can use to review your knowledge.

Common methods of revision that are the least effective:

- Highlighting key points
- Re-reading
- Summarising texts



Retrieval practice

Testing what you know is a powerful tool in revision; the effort to remember something really strengthens your memory. Apps such as Memrise and Quizlet allow you to use or create your own quizzes based on topics. Create them, test yourself or get someone to test you. It works!

Learn more about retrieval practice here: [Link to the Learning Scientists](#)

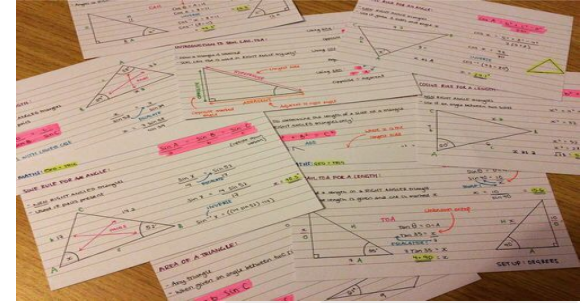
How we learn at Redmoor

Flash cards

Simply create questions on one side, answers on the other. Colour code the cards for specific topics. Post it notes can be useful for keywords and timelines.

Once you have created your flash cards, you need to think about how you will use them effectively. There is a link below to Leitner system of using flashcards:

[YouTube: The Leitner Method](#)



Dual coding



Dual coding is the process of combining verbal materials with visual materials.

Simply take information that they are trying to learn, and draw visuals to go with it

Learn more about dual coding here:

[Link To The Learning Scientists](#)

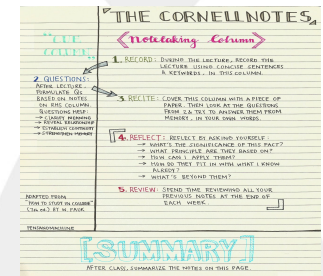
Try to come up with different ways to represent the information. For example: a timeline, a cartoon strip or a diagram of parts that work together.

Cornell Notes

This method can be used in your revision books as a great method to get you to 'think' about your revision.

Simply split your page into 3 sections as shown on the diagram below:

- Note Taking
- Key words / concepts
- Summary



THINK HARD. WORK HARD. GO FAR

How we learn at Redmoor

Spacing and interleaving

Don't revise your all topics in one go (cramming). Instead, you should revise 'chunks' of a topic for small amounts of time (15-30 minutes) and then move onto another 'chunk' from a different Topic.

Eg. topic 1 cells, topic 2 digestive system

This will improve your memory!

Massed presentation



Spaced and interleaved presentation



Mind Maps

Mind mapping is simply a diagram used to visually represent or outline information.

It is a powerful graphic technique you can use to translate what's in your **mind** into a visual picture.

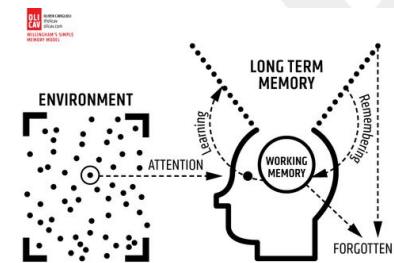
Mind maps help with memorisation of jey knowledge as it helps to organise information and begin to make links and connections to different pieces of information.

The use of visual images helps your brain to memorise the information with simple words next to them - links to dual coding!



Useful links:

- The learning scientists: <https://www.learningscientists.org/>
- Memrise: <https://www.memrise.com/>
- Quizlet: <https://quizlet.com/en-gb>
- Seneca: <https://www.senecalearning.com/>



Literacy

Proofreading Guidance

When we write, we know what we're trying to say, so our brains might skip out words or punctuation. It is important that we proofread to avoid making silly mistakes.

Full Stops & Commas

- A full stop gives a strong pause. It goes at the end of a whole sentence.

e.g. Jake had four brothers. He

got on best with Dan who shared his sense of humour.

- A comma gives a short pause and is used to separate items in a list *e.g.*

Bring some milk, eggs, butter and flour.

After introductory words *e.g. However,*

Between the different parts of a sentence: *Gran, who had been a champion boxer in the sixties, stepped forward.*

Paragraphs

- Change in time, *e.g. Later that day, an important letter arrived.*

- Change in place, *e.g. Back at home things were just as bad. / Chile, however, has a population of...*

- Change of subject, *e.g. As well as mountain biking, I also enjoy swimming...*

- Each time a different person speaks:

"Hey, that's my phone!"

"No it isn't - I had it for my birthday."

Spelling Homophones

Words that sound the same but are spelt differently.

there, their, they're

They're silly to have left their coats over there where there is wet grass.

your, you're

You're such a good friend to lend me your phone.

to, two, too

Two of my friends are coming to Alton Towers too.

Grammar Errors

I have played tennis. ✓ *I of played tennis.* ✗

I should have / should've played tennis. ✓

I of / should of played tennis. ✗

I/she/he were late. ✗ *I/she/he was late.* ✓

They were late. ✓ *They was late.* ✗

You were late. ✓ *You was late.* ✗

I ran quick, passing the ball brilliant. I played amazing. ✗

I ran quickly, passing the ball brilliantly. ✓

I played amazingly. ✓

Apostrophes

- Use an apostrophe to show possession *e.g. John's football is flat.*

- Also use an apostrophe for omissions (the apostrophe shows where a letter or letters are missing) *e.g. I didn't do it. It wasn't me!*

Capital Letters

- At the start of every sentence

- For days, months and celebrations,

e.g. Wednesday, April, Easter

- For proper nouns (names of people and places) *e.g. James, London, Rutland Water*

- For Titles (except the small words) *e.g. The Hunger Games, Match of the Day*

- For abbreviations *e.g. BBC, RSPCA*

Correct Tense

Are you using the correct tense? Do not switch from one to another. - For days, months and celebrations,

- **Past:** *e.g. I ran to the shops.*

- **Present:** *e.g. I am running to the shops*

- **Future:** *e.g. I am going to run to the shops.*

Literacy Marking Code:

sp	Spelling mistake
^	Missing word/letter
O	Capital letter/Punctuation
~~~~~	Unclear/poorly worded
//	New paragraph
th	Use a thesaurus

# Contents Page

English	1-2
Maths	3-4
Science	5-7
MFL	8
History	9
Geography	10-11
ICT	12-13
Art/ Design	14-17
Drama	18-19
ME	20-21
Music	22
PE	23-24



## Equipment

all students must have...



Mobile phones are not to be used in lessons without staff permission  
No photos or videos to be taken without permission  
No school related images or videos to be uploaded on to social media

Black or blue pen  
Pencils  
Ruler - 30cm  
Protractor  
Compass  
Rubber  
Pencil Sharpener  
Purple pen  
Scientific calculator  
Coloured crayons  
Student Organiser  
Knowledge Organiser  
Locker Key

# Redmoor English Department: The Art of Descriptive Writing

BIG QUESTION: What's the point of punctuation?	
Apostrophe	Can be used to show ownership or indicate a missing letter.
Colon	Used to indicate the start of a list
Semi-colon	Used to separate two standalone clauses within a sentence. They cause the reader to pause for longer than a comma but not as long as a full stop.
Question mark	Used at the end of a sentence, when asking a question.
Exclamation mark	Used at the end of an exclamatory sentence to show strong emotion.

BIG QUESTION: How can sentences be manipulated to create effects?	
Simple	A simple sentence contains just one clause (with a subject and one verb). Simple sentences are effective when used sparingly as they are straightforward and direct.
Compound	A compound sentence is formed when you join two main clauses that make sense on their own with a connective. In a compound sentence the clauses are often linked by connectives such as 'and', 'but', 'so' etc.
Complex	A complex sentence contains one main clause and one or more subordinate clause that relies on the main clause to make sense.
Paragraphs	<p>Paragraphs are just a group of sentences sharing the same idea. They structure your writing to make it easier for readers to follow. Always start a new paragraph when you change the focus of your writing.</p> <p>When writing about a new <b>TIME</b> or about a different <b>PLACE</b>. When writing about a new <b>TOPIC</b> or about or as a new <b>PERSON</b>.</p>

Sentence Upgrades	
-ing	<b>Grabbing</b> her bag, the woman stormed out of the shop.
Preposition	<b>Under</b> the dark clouds, the lamppost gleamed.
Adverb	<b>Cautiously</b> , the girl reached out to grab the gun.
Connective	<b>Despite</b> the weather, the girl went outside.
-ing	<b>Grabbing</b> her bag, the woman stormed out.

BIG QUESTION: How are words powerful?	
Adjective	An adjective describes a noun. E.g <i>'the <u>tall</u> building.'</i>
Alliteration	Alliteration occurs when you use the same letter at the start of words that are next to, or near, each other. E.g <i>'Daniel doesn't like dentists.'</i>
Emotive Language	Words that make the reader feel an emotional response such as anger, sadness, joy or sympathy. E.g <i>'the innocent boy broke his leg when the nasty bully pushed him over.'</i>
Metaphor	A metaphor is when you describe someone or something as if it were something else, without using the words 'like' or 'as'. E.g <i>'you are my sunshine.'</i>
Personification	Personification occurs when you give human <u>characteristics</u> to something that isn't human. E.g <i>'the sun smiled at us.'</i>
Onomatopoeia	A word that sounds like the thing it describes. E.g 'Bang' or 'buzz'.
Simile	A simile is a comparison of two things by using the words 'like' or 'as'. E.g <i>'she was as sweet as a honeybee.'</i>
Superlative	A superlative indicates that something is the best or most extreme of its kind. Usually formed by adding '-est' to the end of an adjective. E.g 'smallest', 'happiest' 'longest'.

BIG QUESTION: Why does structure matter?	
Cyclical Structure	If you use a cyclical structure then it means your description ends by making a link back to the beginning.
Varied Sentence lengths	Shorter sentences can alter the pace of your writing. Complex sentences can alter the rhythm. For single, sudden ideas you want to draw attention to, a single sentence or single word paragraph works brilliantly.
First Person Perspective	Written as if the narrator is a character, observing or taking part in the scene..
Third person perspective	Written as if the narrator is talking about the characters and events, but not necessarily a character in them.
Omniscient narrator	A narrator who is god-like, able to move from place to place and character to character, realigning the reader to any perspective they wish to share.

Sentence Upgrades	
Pair of adjectives	<b>Strong and bright</b> , the sun shone onto the forest below.
Triple noun	<b>Owls, crickets, mice</b> : the woods were alive with noise.
Triple adjective	<b>Thin, bare, skeletal</b> : the trees hung over her.
Verb adverb	<b>Perched precariously</b> on the branch, the bird sang.
-ed	<b>Petrified</b> , the woman stood fixed to the spot.



## Redmoor English Department: Poetry - World War 1 Poetry (1914-1918)

VOCABULARY BOOST	
Word	Definition
Condemn	To criticise something or someone strongly.
Coerce	To persuade someone forcefully to do something that they may not want to do.
Enlist	To join the armed forces, or to ask for an get help or support from someone.
Expose	To remove what is covering something so it can be seen, or to bring to public notice.
Pastoral	Writing which gives an idealised version of life in the countryside.
Patriotic	Showing love for your country and being proud of it.
Propaganda	Ideas, information, opinions or images that give one half of the argument.
Psychological	Relating to the human mind and feelings.
Reality	The state of things as they are, rather than as they are imagined to be.

BIG QUESTION: How are words powerful?	
Direct address	Is when a speaker talks directly to the reader or audience.
Imagery	Descriptive language which creates clear images - this could be religious imagery, natural imagery etc.
Imperative	An order or command. Also, something that is very important or urgent.
Irony	The use of words that actually say the opposite of what they really mean.
Metaphor	A phrase which describes one thing as if it is something else.
Personification	When you give an animal, thing or object qualities that only a human can have.
Symbolism	Where an image or object represents something else.
Tone	An attitude of a writer toward a subject or an audience.

BIG QUESTION: Why do form and structure matter?	
Caesura	A break within a line of poetry where there is punctuation to create a pause.
Enjambment	The continuation (spilling over) of a line of poetry onto the next line without punctuation at the end.
Rhyme scheme	The pattern of rhyme within a poem.
Rhythm	The beat of the poem, made up of stressed and unstressed syllables.
Sonnet	A poem with 14 lines which is traditionally about love. It usually ends in a rhyming couplet.
Volta	A turn in the thought or argument on the poem. It can be a dramatic shift in emotion.

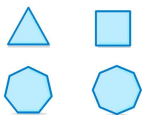
CONTEXT: WORLD WAR I	
1914 - 1918	When the war happened.
Trenches	Long, narrow ditches dug into the ground. Soldiers lived in them.
No man's land	Disputed ground between the trenches of two opposing armies.
Gas	A toxic chemical used as a weapon for the first time during this war.
Shells	Metal projectiles filled with explosives.
Shell Shock	The post traumatic stress disorder many soldiers suffered from.

# Angles and Parallel Lines

## Key Words

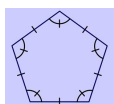
## Definition

### Polygon



A Polygon is a closed 2D shape made of straight lines.  
poly = many  
gon = angles/ sides  
Polygon = many angles/sides.

### Regular Polygon



A polygon where all of the sides are equal and all of the angles are the same.

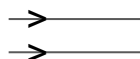
### Irregular Polygon



A polygon where all of the sides are **not** equal and all of the angles are **not** the same.

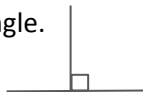
### Parallel Lines

2 lines same distance apart and never meet.



### Perpendicular Lines

2 lines that meet at a right angle.



### Transversal Lines

A **Transversal** is a **line** that crosses at least two other **lines**



### Interior Angle*

An angle inside of a shape

### Exterior Angle*

The angle formed outside a polygon when one side is extended.



# Angles - Parallel Lines

Relationship	Properties
 "Z angles"	Alternate Angles Equal
 "X angles"	Vertically Opposite Angles Equal
 "F angles"	Corresponding Angles Equal
 "C angles"	Co-interior Angles Add up to 180°
 7° 55°	Angles on a straight line Add up to 180°

To find: sum of interior angles

$$= (n-2) \times 180^\circ$$

To find:  
1 interior angle

$$= \frac{(n-2) \times 180^\circ}{n}$$

Sum of Exterior  
+ Interior angle

$$= 180^\circ$$

Sum of exterior angles

$$= 360^\circ$$

To find:  
1 exterior angle

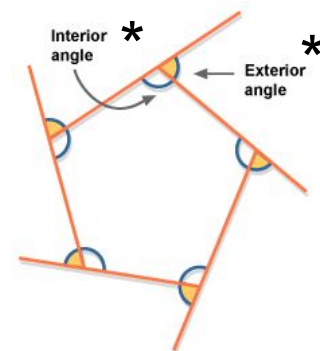
$$= 360^\circ \div \text{number of sides}$$

No. of sides

$$= 360^\circ \div 1 \text{ exterior angle}$$

**Angle =**

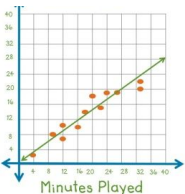
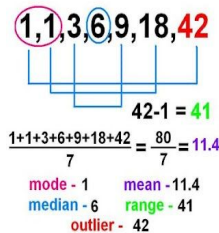
the amount of turning between two rays /lines



$n$  = number of sides

<b>Hexagon</b>  $4 \times 180^\circ = 720^\circ$
<b>Heptagon</b>  $5 \times 180^\circ = 900^\circ$
<b>Octagon</b>  $6 \times 180^\circ = 1080^\circ$

Year 8 Dealing With Data	
Keyword	Definition
Mean	An average found by adding all the numbers and dividing by the frequency
Median	The middle value when data is sorted into order of size. If there is an even number, the median is the mean of the two middle values
Mode	The value that occurs most often
Range	The difference between the smallest and the largest value
Outlier(s)	A value that appears to lie outside of most of the other values.
Scatter Graph Line of Best fit	Shows the relationship between two sets of data.  A 'line of best fit' goes roughly through the middle of all the scatter points on a graph to best represent the trend of the values.  A line upwards = positive correlation A line downward = negative correlation No line of best fit = no correlation
Grouped Frequency Table	Data is grouped together. Tables like these can be very useful when we are working with large data sets or with data sets with a large range of values.
Modal Class	The class/group with the highest/most frequency
Estimate of the Mean	The midpoint of the grouped data is multiplied by frequency. That total is then divided by total frequency to find estimated mean. $\text{Total (Midpoints} \times \text{Frequency)} \div \text{Total Frequency}$



Length	Frequency (f)
$0 \leq \text{ft} < 10$	2
$10 \leq \text{ft} < 20$	6
$20 \leq \text{ft} < 30$	9
$30 \leq \text{ft} < 40$	5
$40 \leq \text{ft} < 50$	3

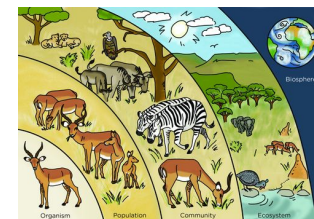
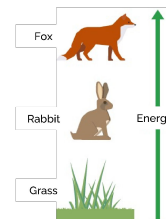
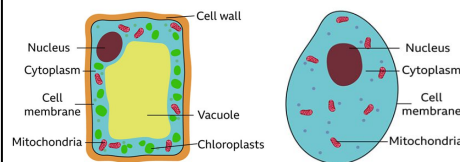
Keywords	Definition														
Prime Factor Decomposition $12 = 2 \times 2 \times 3 = 2^2 \times 3$	Finding which prime numbers multiply together to make the original number. In index form*.														
Lowest Common Multiple (LCM)	The smallest whole number which is a multiple of both numbers														
Highest Common Factor (HCF)	It's the largest number which is a factor of two or more numbers.														
Index Notation $a^2 = a \times a$ $4^3 = 4 \times 4 \times 4$	*A shortcut for writing repeated multiplications by the same number or letter														
<div>Index Laws</div> <div>A set of rules for calculating with numbers in index notation</div> <table border="1"> <thead> <tr> <th>Rule</th><th>Example</th></tr> </thead> <tbody> <tr> <td>$a^m \times a^n = a^{m+n}$</td><td>$2^5 \times 2^3 = 2^8$</td></tr> <tr> <td>$a^m \div a^n = a^{m-n}$</td><td>$5^7 \div 5^3 = 5^4$</td></tr> <tr> <td>$(a^m)^n = a^{m \times n}$</td><td>$(10^3)^7 = 10^{21}$</td></tr> <tr> <td>$a^1 = a$</td><td>$17^1 = 17$</td></tr> <tr> <td>$a^0 = 1$</td><td>$34^0 = 1$</td></tr> <tr> <td>$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$</td><td>$\left(\frac{5}{6}\right)^2 = \frac{25}{36}$</td></tr> </tbody> </table> <div>             -add powers              -subtract powers              -multiply powers              -number/letter remains same              -always 1           </div>		Rule	Example	$a^m \times a^n = a^{m+n}$	$2^5 \times 2^3 = 2^8$	$a^m \div a^n = a^{m-n}$	$5^7 \div 5^3 = 5^4$	$(a^m)^n = a^{m \times n}$	$(10^3)^7 = 10^{21}$	$a^1 = a$	$17^1 = 17$	$a^0 = 1$	$34^0 = 1$	$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$	$\left(\frac{5}{6}\right)^2 = \frac{25}{36}$
Rule	Example														
$a^m \times a^n = a^{m+n}$	$2^5 \times 2^3 = 2^8$														
$a^m \div a^n = a^{m-n}$	$5^7 \div 5^3 = 5^4$														
$(a^m)^n = a^{m \times n}$	$(10^3)^7 = 10^{21}$														
$a^1 = a$	$17^1 = 17$														
$a^0 = 1$	$34^0 = 1$														
$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$	$\left(\frac{5}{6}\right)^2 = \frac{25}{36}$														
Standard Form	Number between 1 & $10 \times 10^x$ $1300 = 1.3 \times 10^3$														

## BIG QUESTIONS:

1. How do plants produce food?
2. How does the body transfer energy from food?
3. How do organisms interact within an ecosystem?
4. What happens to organisms if the ecosystem changes?

## Redmoor Science Department

### Biology – Bioenergetics & interdependence



### 1. How do plants produce food?

Photosynthesis	A chemical process whereby plants make food by absorbing sunlight.
	Carbon dioxide + Water $\rightarrow$ Glucose + Oxygen
Chloroplast	Cell organelle that contains the green pigment chlorophyll which absorbs sunlight for photosynthesis.
Leaf	Plant organ adapted to carry out photosynthesis.
Stomata	Tiny holes on the underside of leaves that open and close to control water loss. Gases diffuse into and out of the plant through them.
Palisade cell	Plant cell adapted to carry out photosynthesis. It contains many chloroplasts.
Plant mineral	Chemical elements and compounds needed for plant growth.

### 2. How does the body transfer energy from food?

Energy	The ability to work or produce a change.
Aerobic respiration	A chemical process whereby oxygen and glucose are reacted to release energy.
	Glucose + Oxygen $\rightarrow$ Carbon dioxide + Water
Anaerobic respiration	A chemical process whereby glucose is broken down without oxygen to release a small amount of energy.
	In animals: Glucose $\rightarrow$ Lactic Acid
	Fermentation: Glucose $\rightarrow$ Ethanol + Carbon dioxide
Lactic acid	Substance formed from anaerobic respiration that causes muscle fatigue, muscle cramps and pain.
Oxygen debt	The amount of oxygen required by the body for recovery after vigorous exercise.



### 3. How do organisms interact with an ecosystem?

Ecology	The study of living organisms and the places they live.
Ecosystem	A community and the habitat in which the organisms live.
Community	All the organisms that live in a habitat.
Habitat	A place where organisms live.
Population	All the members of a single species that live within a geographical area.
Producer	Plants that begin food chains by making food.
Primary consumer	Eat producers.
Secondary consumer	Eat primary consumers.
Tertiary consumer	Eat secondary consumers.
Food chain	A sequence of feeding relationships between organisms.

### 4. What happens to organisms if the ecosystem changes?

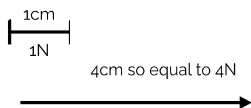
Prey	Organisms that predators kill for food.
Predator	Organisms that kill prey for food.
Interdependence	All organisms in an ecosystem depend on each other for survival.
Bioaccumulation	Toxic materials build up in a food chain and damage the organisms in it.
Adaptations	A characteristic that helps an organism to survive in its environment.
Predator-Prey Cycle	A graph showing the natural rise and fall of numbers of predators and prey in a habitat.
Pesticides	Chemicals used to kill pests.



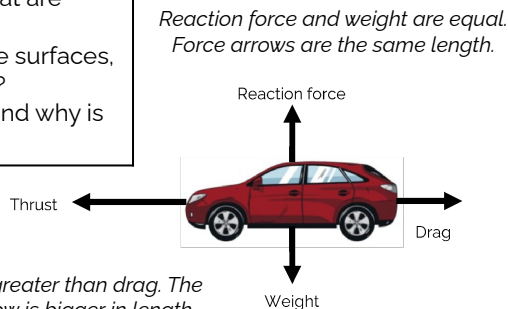
## BIG QUESTIONS:

1. Do forces really exist or are they just a way of describing situations?
2. Where do forces come from and what are they?
3. Why is there so little friction on some surfaces, like ice, but not on others, like wood?
4. How are weight and mass different and why is that important?

Arrows are used to represent the forces acting on an object



*Thrust is greater than drag. The force arrow is bigger in length. The car is accelerating.*



## Redmoor Science Department

### Forces

#### 2. Where do forces come from and what are they?

Air resistance	A force that acts on an object which is moving through air. Air resistance acts in the opposite direction to the direction of movement, so it acts to slow down the moving object
Drag	A force that acts on an object which is moving through a fluid (a liquid or gas) in the opposite direction to its movement, so its effect is to slow down the moving object.
Streamlining	Where the shape of an object causes little resistance in air or in water.
Thrust	The force which acts on a moving object to cause it to move. Thrust is often generated by an engine, for example in a car, rocket or aeroplane.

#### 1. Do forces really exist or are they just a way of describing situations?

Force	A force is a push or a pull that acts on an object due to the interaction with another object. It is measured in Newtons (N).
Contact force	A force that act between two objects that are physically touching.
Non-contact force	A force that acts between two objects that are not physically touching.
Free body diagrams	Show the forces acting on an object in a free body diagram. The arrows represent the size and direction of the forces acting.
Resultant force	The overall force acting on an object.

#### 3. Why is there so little friction on some surfaces, like ice, but not on others, like rubber?

Frictional forces	Forces which resist an object moving
Friction	Friction is a contact force. It acts against the movement of an object.
Lubrication	Applying a slippery substance to two surfaces to reduce friction. Oil is a common lubricant which is applied to moving parts in machines, like the chain and gears on a bike.

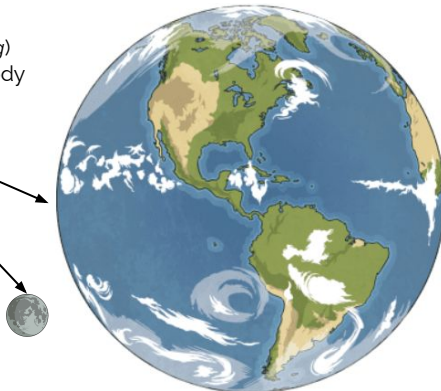
#### 4. How are weight and mass different and why is that important?

Weight	This is the force that acts on an object that is within a gravitational field.
Mass	A measure of the amount of matter an object is made out of. Mass is measured in kilograms (kg).
Gravitational field strength	The force that attracts one kilogram towards another massive object, like a planet. Gravitational field strength has the symbol $g$ and it is measured in newtons per kilogram (N/kg).

Gravitational field strength ( $g$ ) depends on the size of the body acting on the object.

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$g$  on Earth is  $9.8\text{N/kg}$ . The Moon is 6 times smaller than the Earth, and so has a value of  $1.6\text{N/kg}$  for  $g$ .



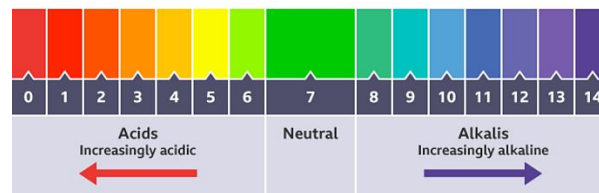
$$\text{Weight} = \text{Mass} \times \text{Gravitational field strength}$$

## BIG QUESTIONS:

1. What are chemical reactions?
2. What are the patterns in chemical reactions of acids?
3. How do acids, alkalis and bases behave?
4. Why do chemical reactions transfer energy?

## Redmoor Science Department

### Chemistry – Chemical reactions



### 1. What are chemical reactions?

Chemical reaction	A process where by the atoms of substances are rearranged to make a different substance.
Word equation	An equation in which only the names of the reactants and products are used to model a reaction.
Reactants	Substance(s) present at the start of a chemical reaction.
Products	Substance(s) formed from a chemical reaction.
Combustion	The process of burning by heat.
Thermal decomposition	Type of reaction in which a compound breaks down to form two or more substances when it is heated.
Oxidation	The gain of oxygen, or loss of electrons, by a substance during a chemical reaction.
Displacement reaction	Reaction where a less reactive element is displaced from its compound by a more reactive element.
Chemical bond	The chemical link that holds molecules together.

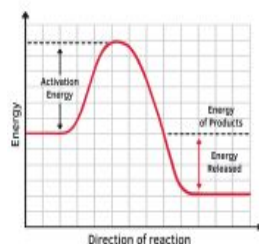
### 2. What are the patterns in chemical reactions of acids?

Acid	Substance which has a pH below 7. Have a high concentration of hydrogen ions (H ⁺ ).
Base	A substance which has a pH above 7. React with acids to neutralise it and produce a salt.
Alkali	A base that is soluble in water.
Corrosive	Able to damage metal, stonework, clothes and skin. Strong acids and alkalis are corrosive.
Neutralisation reaction	Reaction between an acid and an alkali that produces a substance with a neutral pH. A salt and water are also formed.
Salt	Substance produced by the reaction between an acid and a base.

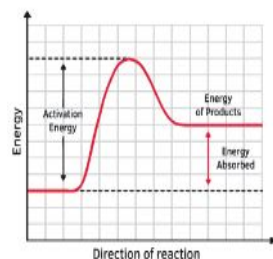
### 3. How do acids, alkalis and bases behave?

Indicator	A substance that has different colours, depending upon the pH of the solution it is in.
Neutral substance	Substance with a pH of 7.
Litmus paper	An indicator that can be red or blue. Red litmus turns blue in alkalis, while blue litmus turns red in acids.
pH	Scale of acidity or alkalinity. A pH (power of hydrogen) value below 7 is acidic, a pH value above 7 is alkaline.
Universal indicator	An indicator solution that produces many different colour changes corresponding to different pH levels.
Catalyst	A substance that changes the rate of a chemical reaction without being changed by the reaction itself.

#### Exothermic reaction



#### Endothermic reaction



### 4. Why do chemical reactions transfer energy?

Exothermic reaction	Reaction in which energy is given out to the surroundings. The surroundings then have more energy than they started with so the temperature increases. E.g., combustion
Endothermic reaction	Reaction in which energy is taken in from the surroundings. The surroundings then have less energy than they started with so the temperature decreases. E.g., photosynthesis
Chemical bonds	The chemical link that holds molecules together.
Energy level diagram	Chart showing the energy in the reactants and products and the difference in energy between them.

French

Tu aimes quelles matières? What subjects do you like?

Phonics (1)	Opinion phrase (2)	School Subject (3)			Quality Vocab (4)	Reason (5)	
e [uh] é [ay] è [eh] ç [ss] an [on] th [t] in [an] ui [we] ai [ay] qu [kuh] tion [see-on] oi [wa]	<b>Ma</b> matière préférée est (My favourite subject is) <b>Mes</b> matières préférées sont (My favourite subjects are) <b>J'adore</b> (I love) <b>J'aime bien</b> ( I really like) <b>Je préfère</b> (I prefer) <b>Je n'aime pas</b> ( I don't like) <b>Je déteste</b> (I hate) <b>Je ne supporte pas</b> (I can't stand)	<b>l'</b> anglais (English) <b>le</b> français (French) <b>les</b> sciences (Science) <b>les</b> maths (Maths) <b>les</b> travaux manuels (Design Tech) <b>l'</b> espagnol (Spanish) <b>le</b> théâtre (Drama)	<b>le</b> dessin (Art) <b>l'</b> EPS (PE) <b>la</b> religion (ME) <b>la</b> cuisine (Cooking) <b>l'informatique</b> (Computing) <b>l'</b> histoire (History) <b>la</b> géo (Geography)	<b>car</b> (because)  <b>parce</b> <b>que</b> (because)  <b>puisque</b> (as)	<b>pour moi</b> (for me) <b>je pense que</b> (I think that) <b>j'estime que</b> ( I reckon that) <b>la plupart du temps</b> (most of the time) <b>je suis l'opinion que</b> (in my opinion) <b>je dirais que</b> (I would say that) <b>heureusement</b> (fortunately) <b>malheureusement</b> (unfortunately)	<b>c'est</b> (it is) <b>ce n'est pas</b> (it isn't) <b>ça peut-être</b> (it can be)	<b>important</b> (important) <b>utile</b> (useful) <b>inutile</b> (useless) <b>difficile</b> (difficult) <b>facile</b> (easy) <b>barbant</b> (boring) <b>une perte de temps/énergie</b> (a waste of time/energy)
						<b>J'aime le prof</b> (I like the teacher) <b>Je déteste le prof</b> (I hate the teacher) <b>il y a trop de devoirs</b> (there's too much homework) <b>ce n'est pas mon tasse de thé</b> (it's not my cup of tea) <b>le prof explique bien</b> (the teacher explains well)	

Décris ton horaire du temps

Describe your timetable

Time Phrase	Time	Verb	Noun
<b>Le lundi</b> (on Monday) <b>Le mardi</b> (on Tuesday) <b>Le mercredi</b> (on Wednesday) <b>Le jeudi</b> (on Thursday) <b>Le vendredi</b> (on Friday)	<b>à huit heures</b> at 8 o'clock <b>à neuf heures</b> at 8 o'clock <b>à dix heures</b> at 10 o'clock <b>à sept heures trente</b> at half past 7 <b>à six heures et quart</b> at quarter past 6	<b>j'ai</b> <b>on a</b>	<b>sciences</b> (science) <b>anglais</b> (English) <b>dessin</b> (Maths)
<b>Le collège commence</b> (School starts) <b>Le collège finit</b> (School finishes) <b>Les cours commencent</b> (Lessons start) <b>La pause déjeuner commence</b> (Lunch starts) <b>La récré commence</b> (Breaktime starts)			

Qu'est-ce que tu vas faire après avoir quitté le collège?

What are you going to do when you leave school?

Time Phrase	Future structure	Infinitive	
<b>Après avoir quitté le collège Redmoor</b> After leaving Redmoor <b>L'année prochaine</b> (next year) <b>À l'âge de dix huit ans</b> (When I am 18) <b>A l'avenir</b> ( In the future)	<b>je vais</b> I am going <b>je voudrais</b> I would like <b>j'ai l'intention de</b> I intend <b>je veux</b> I want <b>je ne vais pas</b> I am not going to <b>je ne veux pas</b> (I don't want to)	<b>aller</b> (to go)	<b>au lycée</b> (to college) <b>à l'université</b> (to university)
		<b>faire</b> (to do)	<b>un apprentissage</b> (an apprenticeship)
		<b>devenir</b> (to become) <b>être</b> (to be)	<b>professeur</b> (teacher) <b>médecin</b> (doctor) <b>fermier</b> (farmer)

# History

## Economic Study

### 1500-modern day

**Social:**  
relating to  
society or  
the people

**Political:**  
relating to  
the  
government /  
ruling elite

**Economic:**  
relating to  
money or the  
wealth of a  
country

## The Transatlantic Slave Trade

**1492:** Columbus lands in the Caribbean  
**1562:** John Hawkins takes first ship of slave to West Indies  
**1619:** Transatlantic Slave Trade in North America begins with first ship full of enslaved Africans docking in Virginia colony (now USA)  
**1772:** Somerset case - court ruling that no slave could be forcibly removed from Britain  
**1789:** publication of Olaudah Equiano's autobiography  
**1807:** The slave trade is abolished by Great Britain  
**1833:** Slavery is abolished in all British colonies  
**1839:** Amistad slave ship rebellion  
**Exploration:** travelling to find new parts of the world  
**Trade Triangle:** the slave trade system Europe/Africa/America  
**Abolition:** to oppose or end something  
**Overseer:** a person who supervised the enslaved or factory workers  
**Olaudah Equiano:** a man who was previously enslaved who wrote about his life  
**Thomas Clarkson:** campaigned for abolition of slavery  
**Granville Sharp:** used legal means to try to abolish slavery  
**William Wilberforce:** MP who campaigned to abolish slavery

## The Industrial Revolution

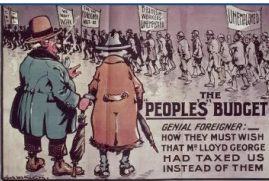
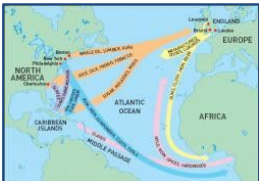
**1600s - 1700s** Enclosure Acts  
**1712:** Newcomen develops steam powered pump  
**1761:** Bridgewater Canal opens  
**1765:** James Watt's steam engine  
**1770:** The Spinning Jenny invented by Hargreaves,  
**1771:** Arkwright builds Cromford Mill textile factory  
**1790s:** Canal Mania - huge investment and construction begins  
**1840's:** Railway Mania - huge investment and construction begins  
**Industrial Revolution:** change from an agrarian economy to manufacturing  
**Steam power:** using pressure from heating water to power machines  
**Iron:** main metal used in manufacturing, steel is an alloy of this  
**Canal:** transporting heavy good by water  
**Turnpike Trust:** Private toll roads  
**Domestic System:** manufacturing items in the home  
**Factory System:** manufacturing in a specially constructed building  
**Industry:** The process of making products by using machines and factories  
**Mass production:** The production of many products in one go e.g. textiles  
**Richard Arkwright:** pioneered the factory system  
**George Stephenson:** engineer and railway pioneer  
**Rural:** countryside areas/settlements  
**Urban:** town or city areas/settlements

## Poverty

**Poverty:** the state of not having enough resources for a minimum standard of living  
**Textiles:** Cloth or clothing production by spinning and weaving  
**Apprentice:** an child (sometimes orphans) who worked in factories in return for food and lodging  
**Workhouse:** a place where poor people could get food and shelter in return for work  
**Depression:** severe downturn in the economy, causes mass unemployment  
**General Strike:** when several sectors go on strike at the same time  
**Liberal Reforms:** Measures to help the poor  
**1906-1914**  
**Pension:** A weekly amount of money given to people over 70 (originally 5 shillings)  
**National insurance:** A form of tax to pay for health and unemployment insurance  
**Welfare:** the health, happiness, and fortunes of a person or group.  
**Welfare State:** the government provides some level of basic support for welfare of its citizens

## Empire

**Empire:** collection of colonies ruled by one state with means to gain power  
**Colony:** an area controlled by a foreign power as part of an empire  
**Imperialism:** a policy to extend a country's power and influence by building an empire  
**1497-1763:** English seamen reached places Europeans had not previously been. Britain then set up colonies and used them to trade all over the world  
**1783-1924:** By 1924 Britain controlled a fifth of the land in the world.  
**After 1924:** After the World War One it became increasingly difficult for Britain to hold on to the Empire





# Geography - Fantastic Places

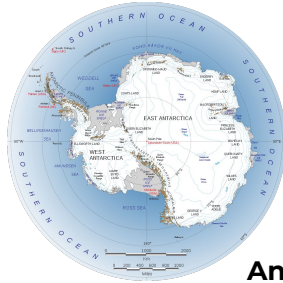
## Antarctica

- Antarctica is the world's southernmost continent. It is the location of the geographic South Pole.
- Antarctica is the world's fifth largest continent by size; 14.2 million km². It is about twice the size of Australia.
- About 98% of Antarctica is covered by ice, this averages about 1.5 miles in thickness.
- Antarctica is the coldest, driest and windiest continent on earth.
- It's population is only about 2000 people, who are temporary scientists and research teams.



## Largest settlements in Antarctica

1. McMurdo Station (USA)
2. Frei Station (Chile)
3. Amundsen-Scott (USA)
4. Mimy - (Russia)
5. Esperanza - Argentina



## Animal Adaptations

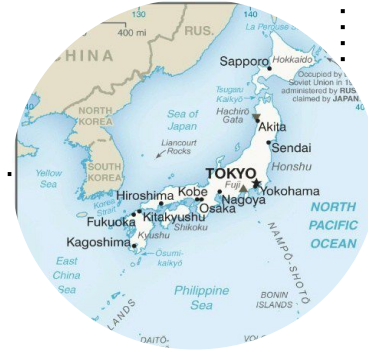
## Deserts

- Deserts are mainly found around the Tropics of Cancer and Capricorn, between 15° and 30° north and south of the equator.
- Deserts are found in North Africa, central Australia and towards the south west of the USA. Deserts are often found on the west coast of continents.
- Deserts have extreme temperatures. During the day temperatures may reach 50 degrees whilst at night it may fall to below 0 degrees.
- Deserts have less than 250 mm of rainfall per year. The rain can be unreliable. Several years can pass between rainfall events.

## Japan

Japan is an Island country located off the eastern coast of Asia.

- It is bordered by the sea of Japan to the west and the Pacific Ocean to the east.
- Japan is an archipelago of 6,852 Islands.
- The five main Islands are Hokkaido, Honshu, Kyushu, Shikoku and Okinawa.
- About 126 million people live in Japan. It is the 11th most populated country in the world.



Fat is stored in the hump of the camel. This provides energy in times of food shortage in the desert. They don't store water in their humps!

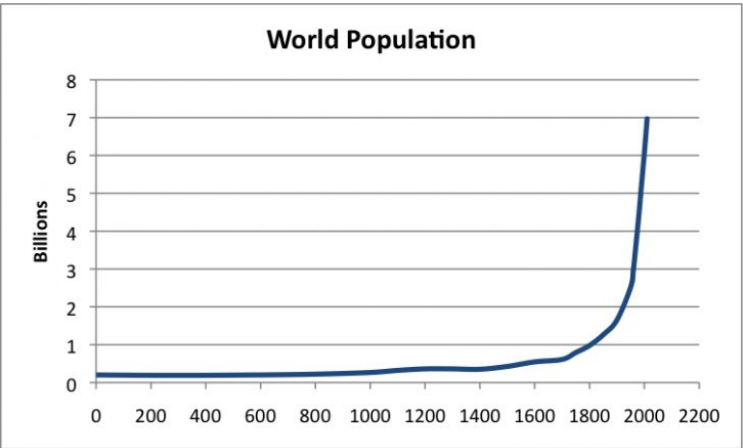
Camels have two rows of eyelashes which are long and slit-like nostrils which help keep out the sand being blown around in the desert.



Thick fur on the top of the body for shade, and thin fur elsewhere to allow easy heat loss in high desert temperatures.

Large padded feet which allows them to spread their weight on the sand.

# Geography Population and Migration



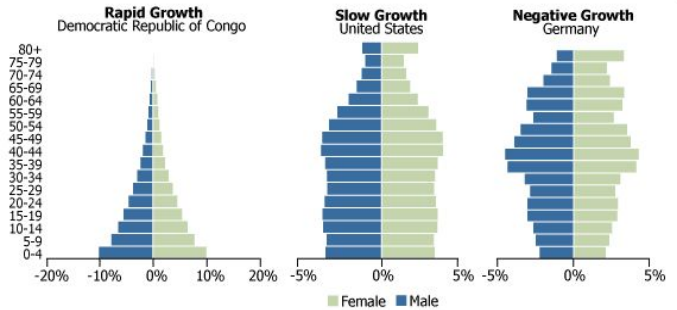
You need to be able to explain what has happened to World Population over time. Study the graph above and make some notes.

There is a 2000 km border between the USA and Mexico as illegal migration is a huge problem. U.S. Border Patrol guards the border and tries to prevent illegal immigrants from entering the country. Illegal migration costs the USA millions of dollars for border patrols and prisons.

Many Americans believe that Mexican immigrants are a drain on the economy. They believe that migrant workers keep wages low which affects Americans.

However other people believe that Mexican immigrants benefit the economy by working for low wages. Mexican culture has also enriched the USA border states with food, language and music.

Key Term	Definition
Population	All the inhabitants of a particular place. E.g The population of the UK is just over 65 million.
Migration	The movement of people from one place to another, usually to live or to work.
Life Expectancy	The average period (years) that a person would expect to live. This varies from country to country.
Birth Rate	The number of live births per 1000 people per year.
Death Rate	The number of deaths per 1000 people per year.
Natural Increase	Birth Rate is higher than Death Rate so the population grows.
Natural Decrease	Death Rate is higher than Birth Rate so population lowers.
Immigration	The movement of people in to a country to live or to work.
Emigration	The movement of people out of a country to live or to work.
Exponential Growth	When the rate of growth increases all the time creating an ever steeper upward curve.
Population Density	The number of people living in a given area. E.g 350 people per KM squared.
Sparsely Populated	A low number of people living in a given area. E.g 3 people per KM squared.
Urban	Relating to towns or cities.
Rural	Relating to the countryside.
Push Factor	Factors that make you want to leave an area E.g War, famine, lack of education.
Pull Factor	Factors that make you come to a certain area E.g low levels of crime, better quality housing.



Population pyramids show the makeup of a country in terms of age and gender. Look at the following website and make comparisons between the population pyramids of poor and rich countries.  
<https://www.populationpyramid.net/world>

# Year 8 Computing

## Impact of Technology

### Key Future Technologies and Terminology

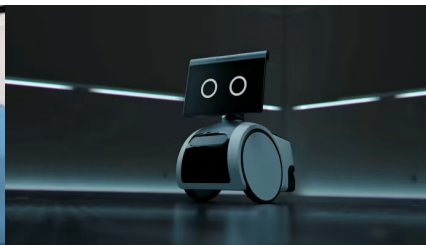
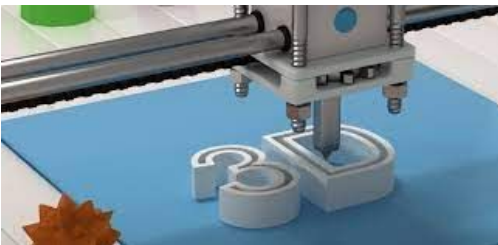
Technology	Machinery and equipment designed using scientific knowledge
Virtual Reality (VR)	A computer made simulation of a 3D world that a person can interact with using special equipment
Augmented Reality (AR)	A computer made image that appears to 'change' or 'alter' the real world.
Automation	The use of machines or computer controlled equipment to perform basic tasks or make new things
Artificial Intelligence (AI)	Code written for a computer to enable it to do tasks normally done by a human or to be able to react in a humanlike way to speech or the world around it
e-Commerce	Buying and selling products on the Internet
Digital Divide	The difference between those who have access to computer equipment and the Internet and those who do not.
3D Printing	Making a physical 3D object from a computer. It 'prints' the object by laying down thin layers of plastic like material.
Robot	A machine resembling a human being and able to copy certain human movements and functions automatically

### Different Types of issue in technology

Ethical issue	An issue related to how someone should behave, particularly when they are at work or completing an activity
Legal issue	An issue related to someone breaking the law
Cultural issue	An issue related to how people are expected to behave in a particular type of society or with a certain group of people
Environmental issue	An issue related to the environment which could include pollution, using up the earth's precious resources or deforestation/damage to the earth's natural world.
Privacy Issue	An issue related to keeping someone's data and information private and safe

**Structuring an answer** - in this topic you will be assessed using extended writing. Your answers need to be structured in the following way.

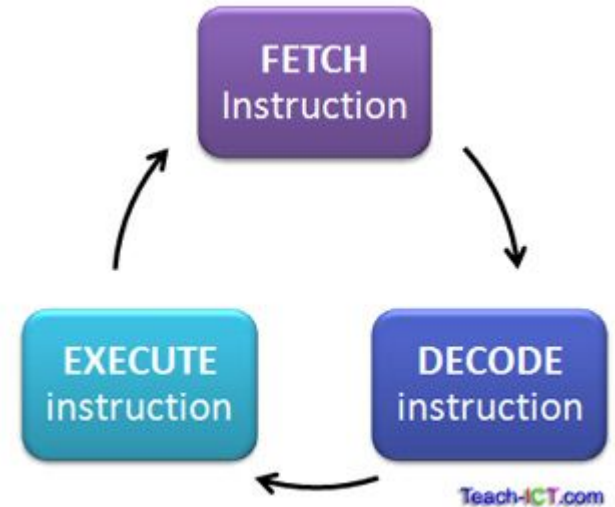
Identify	Identify a key technology that is either a positive to the world, a negative or both.
Explain	Explain both the positives and negatives of this technology
Impact	Explain how this technology makes people's lives better or worse



# Year 8 Computing

## Computer Hardware

Internal Parts of a Computer (Inside the box)	
Motherboard	The main circuit board of a computer that holds most of the components of the computer together.
Processor/CPU	This processes all the instructions in the computer needed to perform a task. It follows the fetch-decode-execute cycle picture on the right.
Random Access Memory (RAM)	A temporary storage for the computer. It stores unsaved works and open programs.
Hard Drive	A storage device that holds data permanently for when the computer is switched off.
Graphics Card	Processes all of the instructions to do with graphics on the screen. Takes the load off the CPU.
Power Supply Unit	The part of the computer that gives power and electricity to all of the other parts.



Different Types of Storage	
Optical	A type of storage that uses a laser to make marks on a disk to store data permanently. These marks can be read by a laser to put data back into a computer.
Magnetic	A type of storage that uses magnetism to magnetise parts of a disk to store data.
Solid State	A type of storage that has no moving parts. It uses electricity and switches to store data.

Types of Software	
Applications	The programs on the computer that do something useful for you as a human being.
Utilities	The programs on your computer that are responsible for how the computer runs and is maintained.
Operating System	The software that manages and runs all of the hardware on your computer.

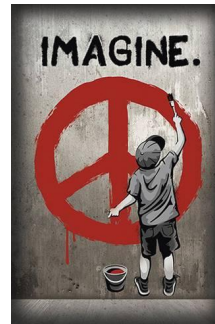


# Year 8 Art - Graffiti

## Can graffiti be transformed into valuable art?

Alecks Cruz is a successful artist that uses graffiti style lettering to create his sculptures. His work is showcased in galleries across the world.

1. Born in Chicago in 1984, Alecks is a self-taught visual artist and **graphic** designer
2. 2011 when Alecks began gaining local recognition by winning design competitions.
3. He explores the **composition** of individual letters and the unique beauty that each character has to offer.
4. Alecks took his love for graffiti art and constructs cardboard graffiti pieces that quickly became his **trademark**.
5. His work shows arrows, barcodes and colours that pop out with hard angles, straight sides and swooping edges.



## Is graffiti an acceptable art form?

- **Graffiti** art as a term refers to images or text painted usually onto buildings, typically using spray paint. Graffiti is marks, scratchings or drawings made on a surface in a public place.
- Graffiti art has its origins in 1970s New York, when young people began to use spray paint and other materials to create images on buildings and on the sides of subway trains. Such graffiti can range from bright graphic images (wildstyle) to the stylised monogram (tag).
- Today, many graffiti are very complicated mixtures of writing and pictures. When done without a property owner's permission it is considered **vandalism**. Sometimes it is just a person's name or a word. Sometimes it is as a public **political protest**.

A **stencil** is a device for applying a pattern, design, words, etc. to a surface, consisting of a thin sheet of cardboard, metal, or other material from which figures or letters have been cut out, a coloring substance, ink, etc., being rubbed, brushed, or pressed over the sheet, passing through the **perforations** and onto a surface.

## How is graffiti created?

**Typography** is the art of designing and arranging letters. It started as a craft in the 15th century with the invention of the printing press and has gradually evolved into an art form in its own right with modern digital technologies offering more creative possibilities.

The term '**Font**' was originally used to identify the design elements in a typeface e.g. **bold**, underlined, or *italic*. Bold type can add an emphasis or strength to a font. Underlined type is an effective way of emphasizing the title of a document. It can also be used to call attention to an important section of text. *Italic* type can also emphasise an important word or passage of text

Serifs are the extended corners at the ends of a letter and like all good design, they evolved naturally. They originated in the stone-carved letters of the Ancient Romans.

Serif fonts are the most legible and are commonly used for large blocks of text. Their wide horizontal baseline emphasizes the line of text for the eye and makes reading more comfortable.

Sans-serif fonts are simply fonts without serifs ('sans' means 'without' in French). They are also sometimes called Gothic



# Year 8 Art - Cultural Art

## What is culture?

Culture is the **characteristics** and knowledge of a particular group of people, encompassing language, religion, cuisine, social habits, music and arts.

"Culture **encompasses** religion, food, what we wear, how we wear it, our language, marriage, music, what we believe is right or wrong, how we sit at the table, how we greet visitors, how we behave with loved ones, and a million other things," Cristina De Rossi.

## Who are the native Americans?

- Native Americans lived in the United States for a very long time before Christopher Columbus discovered America.
- The first people to live in a land are called **indigenous peoples**.
- The Native Americans were grouped into tribes or nations usually based on the area they lived in and their culture such as their religion, customs, and language.
- The Native Americans did not write down or record their history, so we have to find out about their history in other ways.



Evolving from simple cave drawings and carvings traditional American Indian art grew to include intricate art in such forms as jewelry, beadwork, weaving, pottery, paintings, carvings, masks, quillwork (embroidery), and totem poles. Throughout their history their art has reflected their culture, lifestyle, and environment.



How do different cultures use Art and Symbolism?



## What is Aboriginal culture?

- Aboriginal Australians is a western term for the people who are from the Australian mainland and many of its islands
- Aborigines have lived in Australia for over 40,000 years, and it is believed that they came from areas of Asia. These original Australians were hunter-gatherers.
- The didgeridoo is one of the world's oldest musical instruments and is made from limbs and tree trunks hollowed out by termites.
- Dream time refers to the Indigenous understanding of the world's creation.

The earliest Indigenous art was paintings or engravings on the walls of rock shelters and caves which is called rock art. People believe that dots were used in artwork to hide information from white men when the Aboriginal people became afraid that they would be able to see and understand their **sacred**, private knowledge.



## What are the five elements of African art?

There are 5 elements of African art that are used to describe the aesthetics of African art. These are:

1. Resemblance to a human figure.
2. Shiny and unflawed skin.
3. Youthfulness representing vitality and fertility.
4. Reserved demeanor representing a person in control.
5. Balance and proportion through material choices.



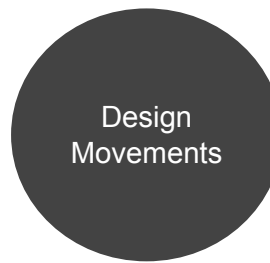
- There are 54 countries in Africa - and 9 territories - with a total of more than 1.1 billion people living on the continent, which is 15% of the world's total population.
- Most of the African people are Christians and Muslims. In North Africa and many West African countries are Islamic.
- There are also almost 10% of Africans that follow **traditional** religious **rituals** which means they have traditional healing rituals such as bone-throwing, 'magic' and herbal medicine and celebrating the spirit of the **ancestors**.
- In Africa, you will find some of the largest mammals on this planet.



# Year 8 Design - Memphis Design

## Why is Karim Rashid one of the most influential product designers of our time?

- Karim Rashid is an Egyptian-born and Canadian-raised industrial designer.
- His designs include **luxury** goods, furniture, lighting, surface design, brand **identity** and packaging.
- Time magazine has described him as the "most famous **industrial** designer in all the Americas" and the "Prince of Plastic".
- He is based in New York City, as well as Belgrade, Miami and Mexico.
- He has over 3000 designs in production and has won over 300 awards.



## Why was Memphis a radical movement?

- In the early 80s, Italian designer and architect Ettore Sottsass founded Memphis, a group of artists and designers who became known for their bright and bold furniture design.
- Although many people ridiculed their work, the Memphis group were **groundbreaking**. Their use of clashing colours, **haphazard** arrangements and brightly coloured plastic laminate was previously unseen. At the time, objects were usually designed to be **functional**, not decorative. Memphis changed this with a more creative approach to design, where they poked fun at everyday objects by designing them in a way that was unusual.
- One of the members of the Memphis group, Nathalie Du Pasquier, collaborated with Danish company HAY to create Memphis-esque patterned bags in 2013. A year later, she designed a collection for the fashion company American Apparel. Elsewhere in fashion, Memphis' work has served as the inspiration for fashion collections by designers such as Dior and Missoni.



## Why make a prototype?

A **prototype** is an early sample, model, or release of a product built to test a **concept** or process. Making a **prototype** can highlight unknown **physical**, **technical** or **financial** issues. It is not meant to be the final version, it's the rough draft form of the product. It will often have **elements** that demonstrate how the product will work, even though the prototype may not have the functionality that the final product will have after it is professionally **manufactured**.



## What makes a successful designer?

Designers must take in to consideration a wide variety of factors in order for their products to be successful and actually sell! ACCESSFM is a mnemonic used to help designers analyse other products. It is also helpful to use as a criteria or checklist when designing new ideas.

### Aesthetics

What does it look like? What makes it appealing?



### Customer

Who would buy the product?



### Cost

How much do you think it costs?



### Environment

What are the impacts on the environment? Can it be recycled?



### Size

What are the dimensions? Does it make it easy/hard to use?



### Safety

How has the product been made safe to use?



### Function

What does the product do? What's the purpose of the product?



### Materials

What materials have been used?





# Year 8 Art - Surrealism

## What is the point of Abstract Art?

The main purpose of abstraction in art is not to tell a story, but to encourage imagination. Abstract art has been around for well over 100 years. Some might even assert that abstraction started with the cave paintings of thousands of years ago.

Abstraction can be traced to **Impressionism, Post-Impressionism** and **Cubism**. It was completely **radical** for its day. Artists began to create simplified objections with little or no reference to the "real" world.

The first artist to create abstract art as we know it will always remain a mystery but Wassily Kandinsky is often credited by historians as he created paintings of floating, **non representational** forms as early as 1912. His work brought abstraction to America during the Armory Show in 1913.

Abstract art now lives in the art world in many forms. It is two- and three-dimensional. It can be vast or small. Abstract art can also be made with many materials and on many surfaces. It can be used in concert with **representational** art or completely abstract. Artists creating it often focus on other visual qualities like colour, form, texture, scale and pattern. The continuing interest in abstract art lies in its ability to inspire our curiosity about the reaches of our imagination and the potential for us to create something completely unique in the world.

## Why is Surrealism the Art of Dreams?

Surrealism began as a philosophical movement that said the way to find truth in the world was through the **subconscious** mind and dreams, rather than through logical thought. The movement included many artists, poets, and writers who expressed their theories in their work.

The movement began in the mid-1920s in France and was born out of an earlier movement called Dadaism from Switzerland. It reached its peak in the 1930s. The artwork often made little sense as it was usually trying to depict a dream or random thoughts. As the Surrealism movement evolved, artists developed new systems and techniques for exploring the irrational world of the subconscious mind. Two trends emerged:

### Biomorphic (or, abstract)

Derived from the Greek words bios (life) and morphe (form), the term refers to abstract forms or images that evoke naturally occurring forms such as plants, organisms, and body parts.



### Figurative

Art which represents the human figure, or even an animal figure, it is visual imagery from the subconscious mind and is used with no intention of making the artwork logically comprehensible.



## Art Style



## What is the artist's role in society?

Every artist plays a different and necessary part in contributing to the overall health, development, and well-being of our society. Creative thinkers and makers provide their communities with joy, interaction, and inspiration, but they also give thoughtful critique to our political, economic and social systems

An illustrator is an artist who creates two-dimensional images for various companies and industries, such as fashion design, children's books, magazines, web sites, technical designs, and advertising. Illustration is an amazing communication tool. Words can explain something to you, but an illustration can show you something — "a picture is worth a thousand words".

An illustrator is usually hired or **commissioned**. There are various stages in an illustrator's work flow that usually include:

- Discussing the client's illustration and design needs
- Negotiating price and deadlines
- Developing a sample to go over with the client
- Producing the illustrations by the deadline

An illustrator will usually begin by sketching out a **draft** of the images they want to make. Once they have an idea of the quantity and the general outline of the whole project, they begin working on drawing each illustration. Illustrators can work from pencil and paper, or digitally on the computer. They can choose the **medium** that works best for their style and their client's needs. Every illustrator has excellent drawing skills so that they can produce all kinds of images and designs.

It is important for the illustrator to listen and understand the client's needs, and be able to exchange ideas and rework multiple **concepts** until both parties come to a final interpretation and illustration. Natural talent, education, and continuous practice is necessary in order to become successful as an illustrator.

## Drama Keywords

<b>Tableau(x)</b>	A dramatic picture, frozen in time with two or more people.
<b>Levels</b>	Gives a stage more visual interest. They allow different characters the opportunity to communicate different status, locations or the audience to see areas more clearly.
<b>Status</b>	The power difference between two or more characters.
<b>Expression</b>	Use of facial expressions to show how you feel.
<b>Ad Lib</b>	Improvisation by an actor - speaking outside the lines of a script.
<b>Projection</b>	To speak loudly in for the audience to hear you words.
<b>Tone of Voice</b>	The emotion heard in your voice of this character.
<b>Gesture</b>	Body or facial movements of a character during a play.
<b>Body Language</b>	To show your emotion towards others or a situation in your body.

Drama techniques, skills and lighting.

## Year 8 Drama: Knowledge Organiser Unit 1: WW1 and The Trenches

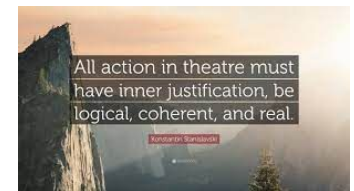
### Context:



- We will look at the conditions of the trenches in WW1 (1914-1918) and try to empathise with the soldiers living in them.
- We will be using **Tableaux**, **Thought-Tracking**, **Movement** and **Soundscape** to create *atmosphere* and *mood*.
- We will look at a scripted piece based on what happens to an under aged soldier who runs away from the trenches.
- We will use **tone of voice**, **body language**, **facial expression** and other skills to portray characters from the script.
- Throughout the topic we will introduce the techniques of theatre practitioner *Stanislavski* and his technique of 'What if?' to create a realistic piece - 'What if I was this soldier, how would I feel fighting for my country? Leaving my family behind & not knowing when I would see them again?'.

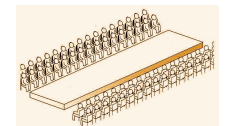
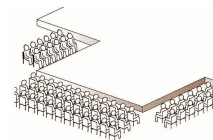
### Practitioners:

*Stanislavski* - According to Stanislavski, an actor only portrays a character truthfully if he actually experiences the feelings specific to a scene. Therefore you have to use empathy to create your character and scene.



### Performance Spaces:

*Traverse* - Form of staging where the Audience is on either side of the acting area.



*Thrust* - The stage projects into the auditorium so that the audience is seated on at least two sides of the extended piece.¹⁸



# Drama Keywords

<b>Thought Tracking</b>	Thoughts of a character are heard out loud, usually in a tableau. 'Tracking their thoughts' in the moment.
<b>Dialogue</b>	The spoken text of a play - conversations between characters - is dialogue.
<b>Monologue</b>	Speech delivered by a single actor alone on stage.
<b>Hot seating</b>	'Hot seated' actor answers questions about their feelings, thoughts, actions as the character. Like an interview.
<b>Projection</b>	The strength of your voice to be used loudly and clearly.
<b>Tone of voice</b>	The emotion HEARD in your voice of this character.
<b>Physicality</b>	The physical mannerisms of a person, especially when overdeveloped or exaggerated.
<b>Spotlight</b>	A 'Spot'/Circle of Light in a small area- to focus on less actors.
<b>Backlight</b>	Light coming from upstage, behind the scenery or actors, to sculpt and separate them from the background.

# Year 8 Drama: Knowledge Organiser

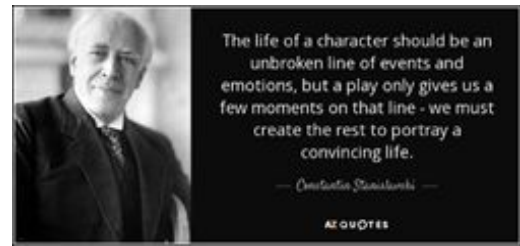
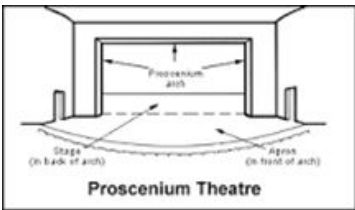
## Unit 2: Devising - Creating Characters

### Context:

- We will be looking at **Stock Characters** and creating our own character using different skills and techniques.
- You will be **hot seating** your character to get to know them better and
- You will be writing a **monologue** for your character.
- We will start to add these characters into a scenario where they will **interact** with different characters, creating **dialogue**.
- **Devising** a scene with different skills and thinking about how your character will **react** and **interact** with others and to situations.
- You will **design** a **costume** for your character which will tell the audience further information about their traits.

### Use of Practitioners, Performance Spaces:

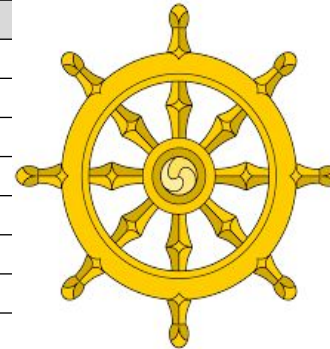
**Performance Space:** *Proscenium Arch* - An arch/frame is created & the Audience have one view point.



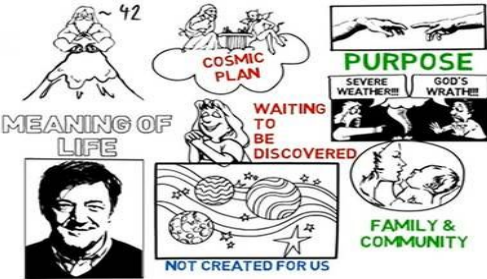
**Practitioner:** *Stanislavski* - He wanted people to experiment to create a character. He believed that you should use everyday language to create a natural/ realistic play, using real settings and 'ordinary' people.

# Morals and Ethics - Pursuit of Happiness

<b>Dhamma</b>	The <b>teachings of the Buddha</b> and the <b>Universal Law</b> . Important to Buddhists because by following it they will reduce their own suffering and the suffering of others, which is the ultimate aim of Buddhism	
<b>Three Marks of Existence</b>	1. <b>Anicca</b> (impermanence): Everything changes and <b>nothing lasts forever</b> . Failure to recognise this leads to clinging and suffering, whereas awareness of it results in letting go of attachment and suffering.	
	2. <b>Anatta</b> (no fixed self): <b>There is no 'you'</b> that is permanent or eternal. Awareness of this can help you become less angry when someone harms 'you'.	
	3. <b>Dukkha</b> (unsatisfactoriness of life, suffering): <b>Suffering is an inevitable part of life</b> and can only be overcome by becoming enlightened.	
<b>The early life of the Buddha</b>	<b>Siddhartha Gautama</b> was born an Indian prince around 2500 years ago. He grew up surrounded by <b>luxury</b> and never experienced hardship or suffering.	
<b>The Four Sights</b>	Siddhartha came across a <b>sick man, old man, dead man and holy man</b> . These inspired him to give up his life of luxury and leave his wife and child.	
<b>The Buddha's Enlightenment</b>	Siddhartha <b>meditated</b> under a tree and was tempted by the demon <b>Mara</b> . Over <b>three watches</b> of the night he became enlightened and from then on known as the Buddha.	
<b>Nibbana</b>	Literally means ' <b>blown out</b> .' <b>Freedom from suffering and rebirth</b> .	
<b>Four Noble Truths</b>	1. <b>The truth of suffering</b> (dukkha): Life is full of suffering.	
	2. <b>The truth of the causes of suffering</b> : Suffering is caused by <b>craving (tanha)</b> and also by the <b>Three Poisons</b> of <b>ignorance, greed and hatred</b> .	
	3. <b>The truth of the end of suffering</b> : Suffering can be ended by ending craving and the three poisons. When a person ends suffering they become enlightened and achieve <b>nibbana</b> .	
	4. <b>The truth of the path to end suffering</b> : The path end suffering is the <b>Middle Way</b> and consists of eight practices (the <b>Eightfold Path</b> ) that are sometimes grouped into three sections (the <b>Threefold Way</b> ).	
<b>The Threefold Way and Eightfold Path</b>	<b>Aspect of Eightfold Path</b>	<b>Explanation</b>
	Right Speech	Speak truthfully and kindly.
	Right Action	Practice the five moral precepts.
	Right Livelihood	Have a job that does not cause suffering.
	Right effort	Work hard to become enlightened.
	Right mindfulness	Become aware of yourself and the world
	Right concentration	Develop focus and concentration.
	Right understanding	Understand the dhamma.
	Right intention	Follow the path with the right intention.
<b>Key quote</b>	<i>"But if any one goes for refuge to the Buddha, the Dhamma and the Sangha he perceives with proper knowledge the four noble truths: suffering; the cause of suffering, the end of suffering and the noble eightfold path leading to the end of suffering."</i> The Buddha in the Dhammapada verses 190-191	



Humanism - Morals and Ethics



HOW CAN I BE HAPPY?

<u>Key Concepts</u>	<u>Definition</u>
Empathy	Trying to consider what it feels like to be in someone else's position.
Humanism	A philosophical worldview that seeks to answer important questions about ethics, meaning and purpose from a non religious point of view.
Philosophy	Thinking about and discussing important questions about purpose and meaning.
Happiness	Being content or fulfilled in your life.
Worldview	The way in which humans interpret the world around them.
Ethics	The rules by which we base our moral decisions.



"You don't need religion to have morals. If you can't determine right from wrong, then you lack empathy, not religion."  
Anonymous



<u>Key words</u>	<u>Meaning</u>
Atheist	A person who disbelieves or lacks belief in the existence of God or gods.
Agnostic	A person who believes that nothing is known or can be known of the existence or nature of God.
Thesist	The belief in the existence of the Supreme Being or deities
Humanist	An advocate or follower of the principles of humanism.
Secular	Unrelated to religion or non-religious.

## Musical knowledge - World Music

### Definitions

1. **Gamelan** – Traditional music from Indonesia
2. **Musical cycle** – A repeated musical phrase often longer than a bar of music.
3. **Scale** – A set of pitches used to write melodies.
4. **Interlocking melody** – Two or more melodies played at the same time that sound like one melody
5. **Drone** – A continual note
6. **Raga** – A scale used for different moods and emotions
7. **Texture** – Describes how melodies, rhythms and harmonies are layered in music

### Layers of sound

**Melody = tune. One note at a time.** Can be sung or played on an instrument.

1. **Melody**



See opposite

2. **Chords**



**Bass line = the lowest part. One note at a time.**

3. **A bass line**



4.

**A beat**



**Beat = rhythm.** Played on **unpitched** instruments such as **drums**.

### Performing in an Ensemble

- Always count the group in at the correct **tempo**.
- Always count out loud to start with to keep everyone in **time**.
- Discuss the **structure** of the music.

### Texture

#### THICK TEXTURE

If there are many layers of melodies, rhythms or harmonies playing at once it is called a thick texture.

#### THIN TEXTURE

If there are only a few layers of melodies, rhythms or harmonies playing at once it is called a thin texture.

#### MUSICAL TEXTURES



#### MONOPHONIC

Contains one melody with no harmonies, although there may be a rhythmic accompaniment.



#### POLYPHONIC

Contains two or more melodies playing at the same time.



#### HOMOPHONIC

Where there is more than one independent melody playing at the same time.

### How to compose

- Decide on a **structure** based on the **style/genre** of the music.
- Decide on a **time signature** based on the **style/genre** of the music.
- Decide on **scale** to use based on the **style/genre** of the music.
- Decide on the shape of the melody.
- Decide on the **rhythm** for the notes
- Use **melodic decoration** to make it interesting.
- Decide on the **texture** and create a **harmony**.



## COMPONENTS OF FITNESS

**Cardiovascular Fitness** – being able to exercise the whole body for long periods of time

**Agility** – Change direction quickly with control

**Speed** – the rate in which you perform a movement

**Strength** – the amount of force a muscle can generate

**Power** – performing a forceful movement as quickly as possible

**Coordination** – moving two or more body parts together

**Muscular Endurance** - repeatedly using the same muscles without them getting tired.

**Balance** - maintaining your body stable when static or moving.

**Flexibility** - the range of movement at a joint.

**Body Composition** - percentage of bone, muscle and fat.

**Reaction time** - ability of your body to reaction to a stimulus.

## FITNESS TESTS - CAN YOU LINK THE FITNESS TEST TO THE COMPONENTS OF FITNESS BEING TESTED?

- 12 Minute Cooper Run
- Standing Stork Test
- Bleep Test
- Sit and Reach Test
- 1 Minute Press Up Test
- BMI
- 1 Minute Sit Up Test
- 30 Meter Sprint
- Illinois Agility Test
- Vertical Jump
- Ruler Drop Test
- Hand Grip Test
- Standing Broad Jump
- Alternate Hand Wall Throw Test



## METHODS OF TRAINING

**Continuous** – working with no rest over a long period of time

**Interval**– periods of high intensity work and rest

**Resistance** – uses free weights or machine to improve strength and power

**Circuit** – a series of stations to improve specific components of fitness

**Fartlek** – ‘speed play’. Continuous running of a variety of intensities and terrains.

**Plyometric** – explosive movements to improve power



# Year 8 PE - Netball

## KEY TERMS

**Court** – The area netball is played on.

**Goal Third** – The 2 areas of the court including the shooting circle.

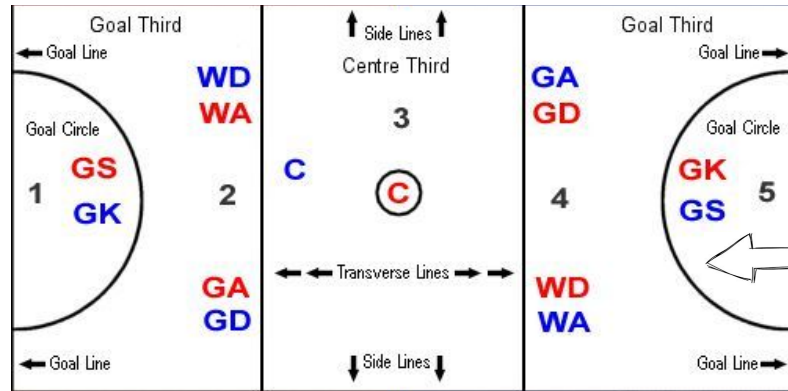
**Centre Third** – The area in the middle including the centre circle.

**Umpire** – The name of the person who officiates the match.

**Other areas of the court:** back line, side line, centre circle, shooting semi-circle.

**Intercept / Interception** – Gaining the ball by getting in between a pass from the opposing team.

**Possession** – Keeping the ball.

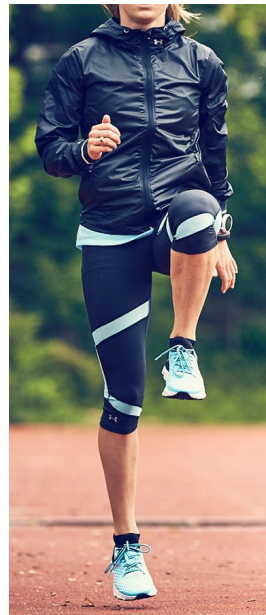


*A netball match lasts for 4 x 15 minute quarters = 1 hour*

## HOW TO WARM UP FOR NETBALL AND OTHER SPORTS

A good warm up must consist of 3 parts;

- 1 – **Pulse raising** activity e.g. jogging
- 2 – **Stretches** (dynamic and static)
- 3 – **Skills practice** e.g. passing



## RULES AND REGULATIONS

**Rules resulting in a FREE PASS** (Involves 1 player):

**FOOTWORK** – A player must not move their landing foot before passing the ball.

**OFFSIDE** – A player must stay in their playing area. See diagram above.

**HELD BALL** - The ball can only be held for 3 seconds by a player.

**REPLAYING** – A player must not bounce the ball to themselves when playing.

**Rules resulting in a PENALTY PASS** (Involves 2 players):

**CONTACT** – A player must not touch another player whilst on court.

**OBSTRUCTION** – Any player must stand 1 meter away from the player with the ball.

## POSITIONS – BLUE TEAM

**How many players on 1 team?**

**Where can they go?**

**Defence:**

GK – 1 & 2

GD – 1, 2 & 3

WD – 2 & 3

**Attack:**

GS – 4 & 5

GA – 3, 4 & 5

WA – 3 & 4

C – 2, 3 & 4

**Which areas can the RED team go into?**

## BIG Questions

1. Can you identify or perform the main skills in netball?
2. Can you identify the components of fitness required for netball and give an example?
3. Can you identify the attack and defend position?

## SKILLS IN ISOLATION

**Passing** – chest, shoulder, bounce.

**Handling** – Ball control.

**Catching** – 1 and 2 handed.

**Footwork** – landings, pivot.

**Evasion** – holding space, dodging.

**Shooting** – 1 or 2 handed.

**Defending** – stage 1 man to man, stage 2 defend the pass.



## APPLICATION OF SKILLS

- Set plays e.g. centre pass, back lines
- Decision making
- Demonstrate communication on court
- Adapt to the environment