



Knowledge Organiser Year 8



Ambition, Respect, Excellence

Your Knowledge Organiser

This is your home learning booklet, in your home learning booklet you will find a Knowledge Organiser for each subject that you are going to study. These are a summary of the most important pieces of information that you need to know. You will be expected to learn all this information and complete activities in your home learning exercise book.

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Knowledge Organiser Timetable

We expect you to complete one full page in your workbook as a minimum. You should spend around 20 minutes on home learning for each subject. Your teachers will check your Knowledge Organiser home learning during lessons, so make sure that you bring your books to school everyday. Your writing needs to be neat with home learning, title and date underlined with a ruler at the top of the page. If your teacher feels that any of these elements are not up to standard, they will enter you for a home learning support session. You will be rewarded house points for completion of homework and additional points will be awarded for exceptional home learning pages.

	WEEK A	WEEK B
MONDAY	ENGLISH PE	ENGLISH MUSIC
TUESDAY	ART DESIGN & TECHNOLOGY	FRENCH DESIGN & TECHNOLOGY
WEDNESDAY	MATHS DRAMA	MATHS ONLINE PSHE
THURSDAY	GEOGRAPHY ICT	HISTORY ETHICS & CULTURE
FRIDAY	DANCE SCIENCE	SCIENCE

How To Use Your Knowledge Organiser For Homework

The Knowledge Organisers are designed to help you learn a wide range of knowledge which in turn will mean you are more prepared for your lessons as well as the new style GCSEs that you will sit in the future.

For homework you should use your knowledge organiser to complete one of our accepted strategies in your workbook you should either:

- **Write**
- **Mind Map**
- **Transform**

Do not just copy into your workbook!

The first 12 pages contain some tips on how you can use your workbook.

Your teacher will check your workbook each week.

Knowledge Organiser Quiz

Your teacher will quiz you on your Knowledge Organiser twice a term to check how well you are doing your homework. The 'Mark' box must be used to record your score from each quiz.

	ENGLISH	MATHS	SCIENCE	ART	HISTORY
QUIZ 1					
QUIZ 2					
	FRENCH	ICT	PE	DANCE	GEOGRAPHY
QUIZ 1					
QUIZ 2					
	PHSE	E&C	MUSIC	DESIGN & TECHNOLOGY	
QUIZ 1					
QUIZ 2					

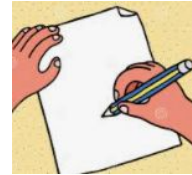
Look, Cover, Write, Check, Correct

Look through and read the information on a section of your Knowledge Organiser.



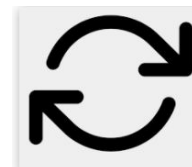
Then **cover** the section so you can no longer see the information.

Write everything you can remember, including any diagrams/drawings or tables



Check and **correct** your work using green pen.

Repeat until you have got everything correct.



Look, Cover, Write, Check, Correct

Examples:

Write down as much information as you can remember from your Knowledge Organiser subject page. Mark all the information you got right and correct any mistakes/add in detail where you missed it.

Remembering Key Information

Reflex arc means a quick response.
Reflex arc mean an involuntary response. ✓

Antibiotics means a medicine that prevent the ^{growth} microorganisms but does not help any viruses. ✓

A platelet helps the clotting and into a scab, making a clot/scab.
cholesterol is a fatty substance is ^{needed} for your body to probably. definitely needed.

A ligament is a that joins a ^{bone} meseta.

purple pen improvement I used the Look, cover, write, check, correct.

The nervous system is inside your body and is in most parts of your body but your B

Homework Support

Science

Drugs are chemical substances that affect the way you work. ✓

They are additional recreational. x medicinal. They can be painkillers, stimulants, hallucinogens and depressants.

Receptors are found in sense organs. ✓

Effectors are muscles or glands and carry out a response. ✓

Blood is made up of plasma (liquid), Red blood cells and white blood cells (carry oxygen) (fight infection).

and platelets.

There are 3 main types of pathogen: fungi, viruses and bacteria. ✓

There are several lines of defence against pathogens - primary defences: skin, stomach acid, nasal hairs. ✓ mucus and secondary defences: the immune system.

Vein - carries blood to the heart at low pressure. They have thin walls and valves to stop * blood. * backflow of ✓

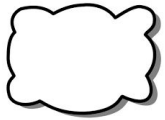
Artery - carries blood FROM the heart at a high pressure. Have thick elastic walls.

Capillary - link arteries and veins. Carry blood to tissues and remove waste.



Look, Cover, **Mind Map**, Check, Correct

Look through and read the information on a section of your Knowledge Organiser then **cover** it up.



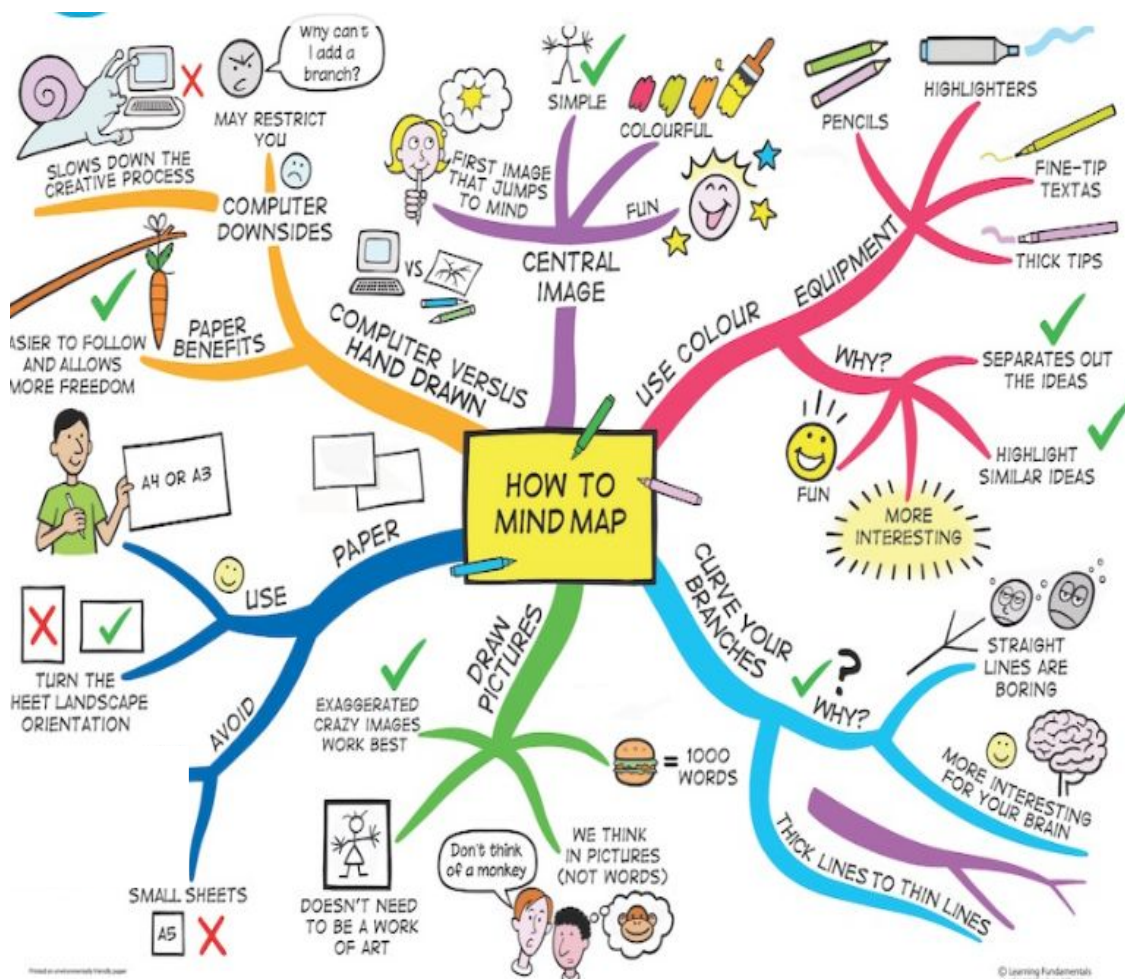
Then come up with a **title** for the section and put a bubble or star around your word

Write everything you can remember, including any diagrams/ drawings or tables.



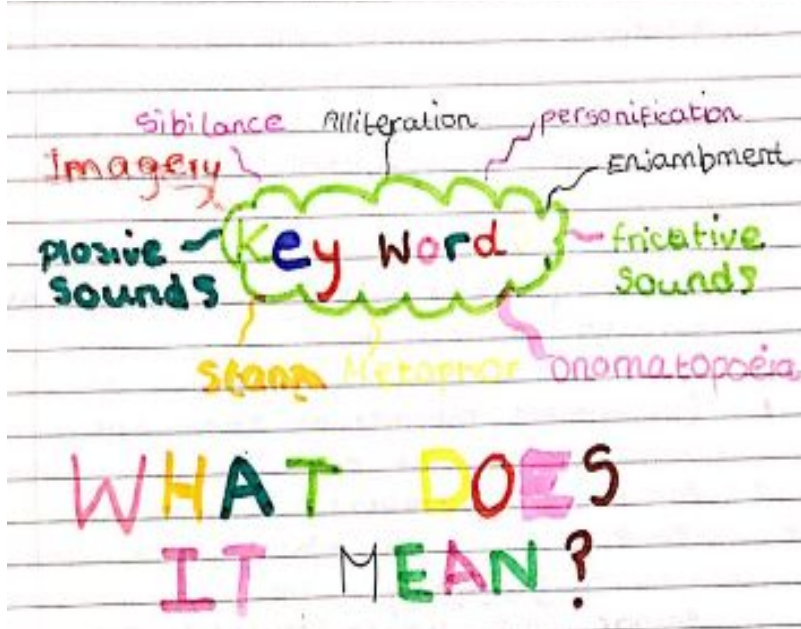
Check and **correct** your work using green pen.

Repeat until you have got everything correct.



Look, Cover, **Mind Map**, Check, Correct

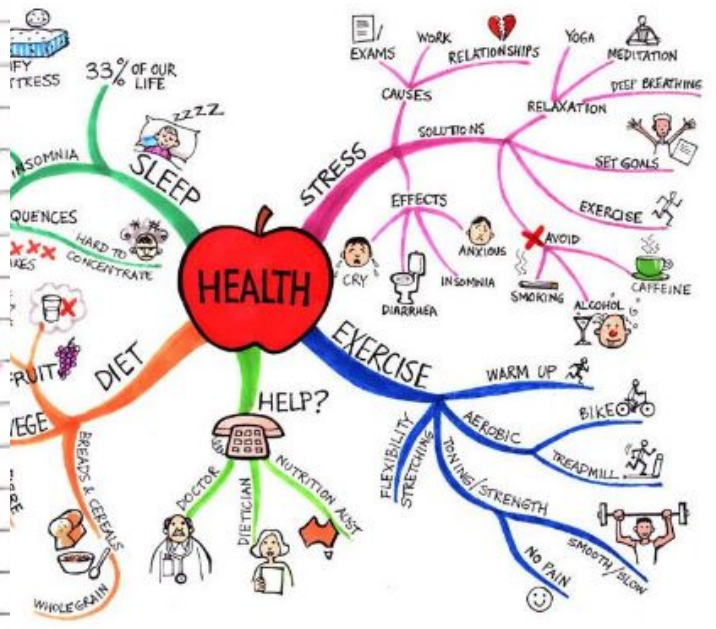
Examples:



WHAT DOES IT MEAN?

Onomatopoeia means a word that sounds like what it is.

Metaphors - means a non literal description for effect



Look, Cover, **Transform** Check, Correct

Look through and read the information on a section of your knowledge organiser then **cover** it up



Then **transform** the section, you can transform the information into one of the below:

- A selection of keywords
- Spellings you have to learn
- Song/poem to help you remember
- Key facts from the sheet
- Transform the descriptions into pictures/comic strip
- Transform it into revision card boxes
- Piece of extended writing based on the information.



Check and **correct** your work using green pen.

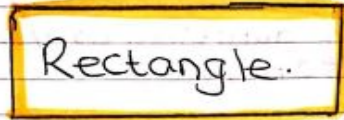


Look, Cover, Transform, Check, Correct

Example:

Maths.

Shapes!



$$= L \times W$$



$$A = \frac{1}{2} \times (a+b) \times H$$



$$= \frac{1}{2} \times \text{base} \times \text{vertical height}$$

$$A = \frac{1}{2} \times b \times h$$

Shape Names!

cylinder.

Cube

Cuboid

Cone

pyramid

Sphere

hemisphere

triangular

prism

parallelogram

WIKI English

Trapezium

WIKI Geography

3 Facts about Oceans!...

Fact 1 - 70% of the oxygen we breathe is produced by Marine plants.

Fact 2 - 97% of the Earth's water supply is contained in the ocean.

Fact 3 - 30% of CO₂ emissions produced by humans are absorbed by the oceans.

deserts - Very hot deserts are

poems!

Blessing - a free verse poem about poverty and the importance of water.

It focuses on a slum on the outskirts of Mumbai in India and in particular the reaction of children who come to celebrate and drink when a pipe bursts.

Island man - is a short poem that focuses on the cultural of Caribbean man who wakes up in London but is dreaming that he's on a native island. In search for my lounge - the poet explores the internal conflict of she feels about losing her Indian cultural identity.

Half caste - about mixed race and people's identity and people's culture.

Nothing's changed - Talks about the rampant apartheid system in District Six near Cape Town in South Africa and explores all about racism. The ironic title brings to light how the apartheid has changed nothing but the appearance of District Six.

opics. They are h
nes intensely.

pical rainforests
equator
we air is risu



READING: Gothic Fiction

Tier 2 Vocabulary

1. **Melancholy:** a feeling of pensive sadness, typically with no obvious cause. Noun and adjective.
2. **Foreboding:** a feeling that something bad will happen; fearful apprehension. Noun. Implying that something bad is going to happen. Adjective.
3. **Wretched:** (of a person) in a very unhappy or unfortunate state/ of poor quality; very bad/ used to express anger or annoyance. Adjective.
4. **Malice:** the desire to harm someone; ill will. Noun.
5. **Grotesque:** comically or repulsively ugly or distorted. Strange and unpleasant, especially in a silly or slightly frightening way. Adjective.
6. **Uncanny:** strange or mysterious, especially in an unsettling way. Adjective.
7. **Sombre:** dark or dull in colour or tone. Having or conveying a feeling of deep seriousness and sadness. Adjective.
8. **Sinister:** giving the impression that something harmful or evil is happening or will happen. Adjective.

Gothic Conventions

1. One of the things that the gothic does is create terror. It can also create less strong feelings of discomfort and fear.
2. Old or abandoned settings.
3. Terrifying villains including vampires, madmen, ghosts.
4. Innocent, weak victims
5. Doubt about whether things are real.
6. Madness and bad dreams
7. Creepy and spooky atmospheres
8. An inability to escape the past
9. Can include the supernatural, or things which seem supernatural.

READING: Gothic Fiction

Technical Terminology

Gothic: is a genre of writing (and theatre, and film...) One of the things that the gothic does is create terror. It can also create less strong feelings of discomfort and fear.

Enlightenment: A period in the 1800s known as the 'age of reason'.

Enlightenment emphasised reason, analysis, and individualism. Rather than following religious teachings, enlightenment thinkers turned to scientific study.

Genre: comes from the French word which means type. A genre is a category of literature identified by form, content, and style.

Conventions: are the defining characteristics, or must-haves, of a given genre.

Method: Something the writer does with words or structure in their story.

Effect: The things that a method makes us think of or feel.

Context: the circumstances that form the setting for an event, statement or idea.

Reference: Giving an example from the text. Could be a quote or pointing to a specific moment.

Quotation: A word or phrase from the text labelled in quote marks.

Inference: What is shown or suggested by specific words.

Language: The words or techniques used by the writer.

Ideas: The points made by the writer.

Analysis: a detailed examination of the smaller parts of a text (such as the words used) considering possible meanings and effects.

Villain: A character who has evil plans, or does evil things, which affect other characters.

Archetype: A typical example of something.

Madman: A character who has lost his mind. This isn't a word you would use about a real person.

Perspective: This means 'point of view'. If someone tells you a story, they are telling it from their perspective.

Noun: A word which names a thing, person or feeling (table, James, love.)

Verb: A doing, being or having word (run, be, have.)

Adjective: A word which describes a noun (yellow, big.)

Adverb: A word which describes how a verb is completed (quickly, often.)

Simile: when you compare two things using 'as' or 'like'.

Metaphor: when you say something is something else.

Personification: when you give an animal or object qualities or abilities that only a human can have.

Pathetic Fallacy: Using the setting and weather to reflect characters' feelings.

READING: Gothic Fiction

Key Concept: Fear

Fear is a natural and primitive emotion that can be experienced by everyone to some degree. It alerts us to the presence of dangers, whether they be real dangers or imagined.

People may experience fear when in situations such as walking home alone at night, when faced with animals they perceive as dangerous, or when about to skydive out of a plane.

Fear can also be attributed to feelings of stress and anxiety. It may also contribute to some feelings of disgust, as according to a study investigating those who feared or did not fear snakes, those who experienced this fear reported high feelings of disgust as well as fear.

Fear is a normal response to many situations and is composed of two primary reactions: biochemical and emotional reactions.

- The biochemical reaction to fear causes our bodies to respond to perceived threats in the environment. This produces automatic physical reactions such as sweating, increased heart rate, and dilated pupils. The purpose of these bodily reactions is to prepare the body to either combat the threat or to run away from it - this is called the 'fight or flight' response.
- The emotional response to fear, however, is personalized to the individual. Since the biology of fear involves some of the same chemical responses to positive emotions such as excitement and happiness, people can experience either positive or negative emotions to fear. For instance, some people may find enjoyment in riding extreme roller coasters whilst others may have a negative reaction and will avoid these at all costs.

Online Maths Work

You can access your online maths support/homework through www.mymaths.co.uk

Maths homework is set on this once a fortnight. You can try the tasks more than once and should aim to continue until you get at least 'amber' in each set homework. Once complete, you need to record your score and your parents should sign to say they have seen the work.

The school login for mymaths is:

School Log-in: whitstonessecondary

Password: fraction280

Students will also be given their own unique login from their Maths teacher. This can be written here so you don't forget it:

Username:

Password:

	Topic Practised	Score/ RAG	Signed by parent / carer
1			
2			
3			
4			
5			
6			
7			
EXTRA			

Week A Knowledge Organiser

Week B Mymaths Teacher Set Task

Brackets, Equations & Inequalities

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Form Expressions
- Expand and factorise single brackets
- Form and solve equations
- Solve equations with brackets
- Represent inequalities
- Form and solve inequalities

Keywords

- Simplify:** grouping and combining similar terms
- Substitute:** replace a variable with a numerical value
- Equivalent:** something of equal value
- Coefficient:** a number used to multiply a variable
- Product:** multiply terms
- Highest Common Factor (HCF):** the biggest factor (or number that multiplies to give a term)
- Inequality:** an inequality compares two values showing if one is greater than, less than or equal to another

Form expressions

For unknown variables, a letter is normally used in its place


More than - ADD

Less than/ difference - SUBTRACT

eg 4 more than t \longrightarrow $t + 4$
 8 less than k \longrightarrow $k - 8$

Only similar terms can be grouped together

eg Find the perimeter of this shape
 (Perimeter = length around outside of shape)

t  $t + 2t + 1 + t + 2t + 1 \longrightarrow 6t + 2$

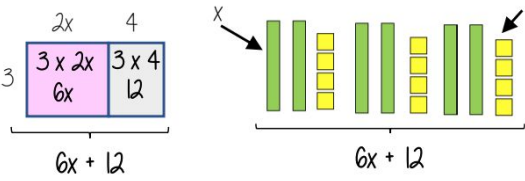
Directed numbers

- $++ \longrightarrow +$
- $-- \longrightarrow +$
- $+- \longrightarrow -$
- $-+ \longrightarrow -$

eg $a = -5$ and $b = 2$
 $a^2 = a \times a = -5 \times -5 = 25$
 $b + a = 2 + -5 = -3$

Multiply single brackets

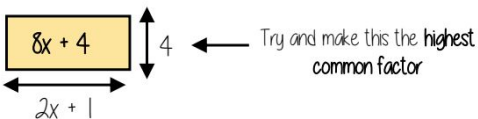
$3(2x + 4)$



Different representations of $3(2x + 4) = 6x + 12$

Factorise into a single bracket

$8x + 4$



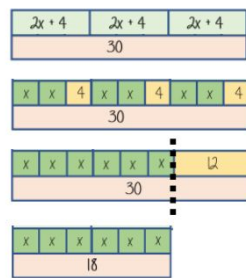
The two values multiply together (also the area) of the rectangle

$8x + 4 \equiv 4(2x + 1)$

Note:
 $8x + 4 \equiv 2(4x + 2)$
 This is factorised but the HCF has not been used

Solve equations with brackets

$3(2x + 4) = 30$



$3(2x + 4) = 30$

Expand the brackets

$6x + 12 = 30$

$-12 \quad -12$

$6x = 18$

$-6 \quad -6$

Substitute to check your answer. This could be negative or a fraction or decimal

$\frac{x}{3} = 3$

Simple Inequalities

- $<$ less than
- \leq Less than or equal to
- $>$ More than
- \geq More than or equal to

$x < 10$
 Say this out loud
 "x is a value less than 10"

Note:
 $x < 10$ and $10 > x$
 represent the same values

$x + 2 \leq 20$

"my value + 2 is less than or equal to 20"

$x \leq 18$

The biggest the value can be is 18

$10 > x$
 Say this out loud
 "10 is more than the value"

Form and solve inequalities



Two more than treble my number is greater than 11

Find the possible range of values

Form

$x \longrightarrow x \times 3 \longrightarrow +2 \longrightarrow 11$

$3x + 2 > 11$

Solve

$x \longleftarrow -3 \longleftarrow -2 \longleftarrow 11$

$x > 3$

Check

This would suggest any value bigger than 3 satisfies the statement

$3 \times 3 + 2 = 11 \checkmark$

$10 \times 3 + 2 = 32 \checkmark$

Algebraic constructs

Expression

A sentence with a minimum of two numbers and one maths operation

Equation

A statement that two things are equal

Term

A single number or variable

Identity

An equation where both sides have variables that cause the same answer includes \equiv

Formula

A rule written with all mathematical symbols eg area of a rectangle $A = b \times h$

Week A Knowledge Organiser

Week B Mymaths Teacher Set Task

Sequences

@whisto_maths

What do I need to be able to do?

- By the end of this unit you should be able to:
- Generate a sequence from term to term or position to term rules
 - Recognise arithmetic sequences and find the n th term
 - Recognise geometric sequences and other sequences that arise

Keywords

- Sequence:** items or numbers put in a pre-decided order
Term: a single number or variable
Position: the place something is located
Linear: the difference between terms increases or decreases (+ or -) by a constant value each time
Non-linear: the difference between terms increases or decreases in different amounts, or by x or \div
Difference: the gap between two terms
Arithmetic: a sequence where the difference between the terms is constant
Geometric: a sequence where each term is found by multiplying the previous one by a fixed non zero number

Linear and Non Linear Sequences

Linear Sequences – increase by addition or subtraction and the same amount each time

Non-linear Sequences – do not increase by a constant amount – quadratic, geometric and Fibonacci

- Do not plot as straight lines when modeled graphically
- The differences between terms can be found by addition, subtraction, multiplication or division

Fibonacci Sequence – look out for this type of sequence

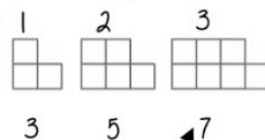
0 1 1 2 3 5 8 ...

Each term is the sum of the previous two terms



Sequence in a table and graphically

Position: the place in the sequence



"The term in position 3 has 7 squares"

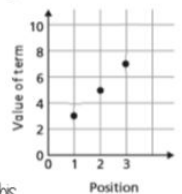
Term: the number or variable (the number of squares in each image)

In a table

Position	1	2	3
Term	3	5	7

+2 +2

Graphically



Because the terms increase by the same addition each time this is **linear** – as seen in the graph

Sequences from algebraic rules

$$3n + 7$$

This will be linear - note the single power of n . The values increase at a constant rate

$$2n - 5$$

- eg
- 1st term = $2(1) - 5 = -3$
 - 2nd term = $2(2) - 5 = -1$
 - 100th term = $2(100) - 5 = 195$

$$3n^2 + 7$$

This is not linear as there is a power for n

Substitute the number of the term you are looking for in place of 'n'

Checking for a term in a sequence

Is 201 in the sequence $3n - 4$?

$$3n - 4 = 201$$

Algebraic rule

Solving this will find the position of the term in the sequence. ONLY an integer solution can be in the sequence

Term to check

Complex algebraic rules

Misconceptions and comparisons

$$2n^2$$

2 times whatever n squared is

- eg
- 1st term = $2 \times 1^2 = 2$
 - 2nd term = $2 \times 2^2 = 8$
 - 100th term = $2 \times 100^2 = 20000$

$$(2n)^2$$

2 times n then square the answer

- eg
- 1st term = $(2 \times 1)^2 = 4$
 - 2nd term = $(2 \times 2)^2 = 16$
 - 100th term = $(2 \times 100)^2 = 40000$

$$n(n + 5)$$

- eg
- 1st term = $1(1 + 5) = 6$
 - 2nd term = $2(2 + 5) = 14$
 - 100th term = $100(100 + 5) = 10500$

You don't need to expand the expression

H Finding the algebraic rule

This is the 4 times table $\rightarrow 4, 8, 12, 16, 20, \dots$

$$4n$$

$\downarrow \downarrow \downarrow$
7, 11, 15, 19, 22

This has the same constant difference – but is 3 more than the original sequence

$$4n + 3$$

This is the constant difference between the terms in the sequence

This is the comparison (difference) between the original and new sequence

Week A Knowledge Organiser

Week B Mymaths Teacher Set Task

Indices

@whisto_maths

What do I need to be able to do?

By the end of this unit you should be able to:

- Add/ Subtract expressions with indices
- Multiply expressions with indices
- Divide expressions with indices
- Know the addition law for indices
- Know the subtraction law for indices

Keywords

Base: The number that gets multiplied by a power

Power: The exponent – or the number that tells you how many times to use the number in multiplication

Exponent: The power – or the number that tells you how many times to use the number in multiplication

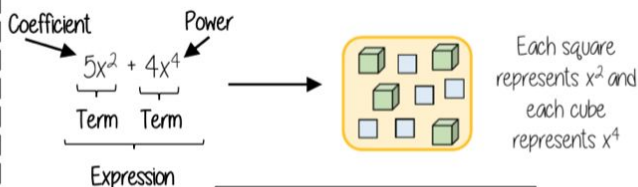
Indices: The power or the exponent

Coefficient: The number used to multiply a variable

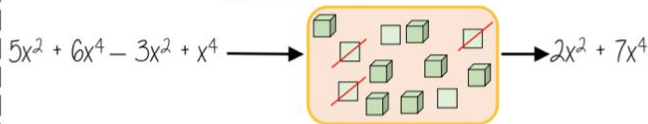
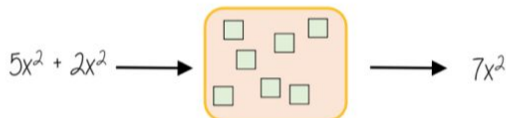
Simplify: To reduce a power to its lowest term

Product: Multiply

Addition/ Subtraction with indices



Only similar terms can be simplified
If they have different powers, they are unlike terms



Multiply expressions with indices

$$4b \times 3a$$

$$\equiv 4 \times b \times 3 \times a$$

$$\equiv 4 \times 3 \times b \times a$$

$$\equiv 12ab$$

$$5t \times 9t$$

$$\equiv 5 \times t \times 9 \times t$$

$$\equiv 5 \times 9 \times t \times t$$

$$\equiv 45t^2$$

$$2b^4 \times 3b^2$$

$$\equiv 2 \times b \times b \times b \times b \times 3 \times b \times b$$

$$\equiv 2 \times 3 \times b \times b \times b \times b \times b \times b$$

$$\equiv 6b^6$$

There are often misconceptions with this calculation but break down the powers

Addition/ Subtraction laws for indices

$$3^5 \times 3^2 \longrightarrow 3^7$$

$$= (3 \times 3 \times 3 \times 3 \times 3) \times (3 \times 3)$$

The base number is all the same so the terms can be simplified

Addition law for indices

$$a^m \times a^n = a^{m+n}$$

$$3^5 \div 3^2 \longrightarrow 3^3$$

$$\frac{3 \times 3 \times 3 \times 3 \times 3}{3 \times 3} \longrightarrow \frac{3^3}{3^0} \longrightarrow \frac{3^3}{1}$$

Subtraction law for indices

$$a^m \div a^n = a^{m-n}$$

Divide expressions with indices

$$\frac{24}{36} \longrightarrow \frac{\cancel{2} \times \cancel{2} \times 2 \times \cancel{3}}{\cancel{2} \times \cancel{3} \times 2 \times \cancel{3}} \longrightarrow \frac{2}{3}$$

$$\frac{5a^3b^2}{15ab^6} \longrightarrow \frac{\cancel{5} \times \cancel{a} \times \cancel{a} \times \cancel{a} \times \cancel{b} \times \cancel{b}}{3 \times \cancel{5} \times \cancel{a} \times \cancel{b} \times \cancel{b} \times \cancel{b} \times \cancel{b} \times \cancel{b}} \longrightarrow \frac{a^2}{3b^4}$$

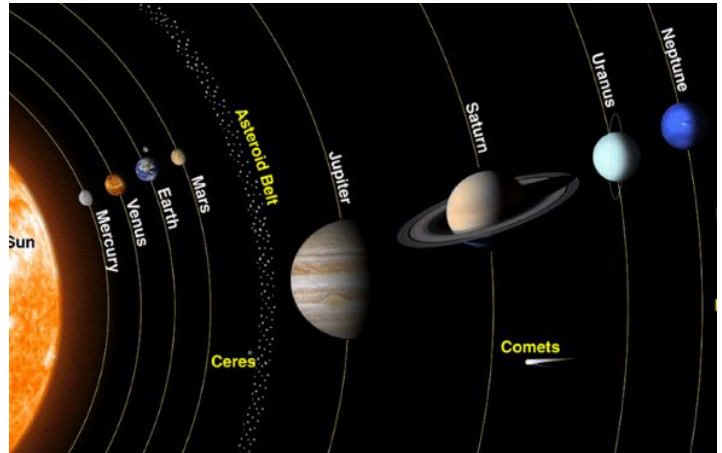
Cross cancelling factors shows cancels the expression

$$\frac{23a^7y^2}{5db^6}$$

This expression cannot be divided (cancelled down) because there are no common factors or similar terms

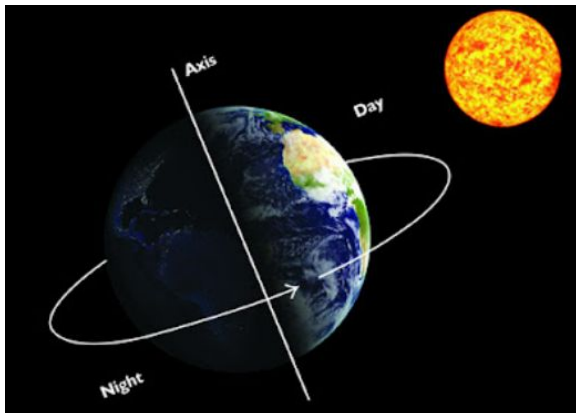
Space

The night sky can many objects. Most of the dots we see are stars - some of which may not be there now. Most of them are from our **galaxy** - the **Milky Way**. A galaxy is a collection of stars. We can also soo planets in the night sky. There are 5 that can be seen with the naked eye: Mercury, Venus, Mars, Jupiter, and Saturn. Satellites can also be seen in the sky. Our **Moon** is a **natural satellite** as it orbits the Earth. The International Space station (ISS) is an **artificial satellite**. We may also see comets (made of ice) and **meteors** (made of rock) in our sky.



Our **solar system** contains 8 planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune. The first four planets are known as the **terrestrial planets**, and have a surface made of rock. An **asteroid belt** separates these terrestrial planets from the **Gas giants** - the other four planets. These Gas giants are made of gases such as hydrogen and helium.

Venus is the hottest planet, Jupiter is the largest planet, and Neptune is the coldest planet as it is the furthest from the Sun.

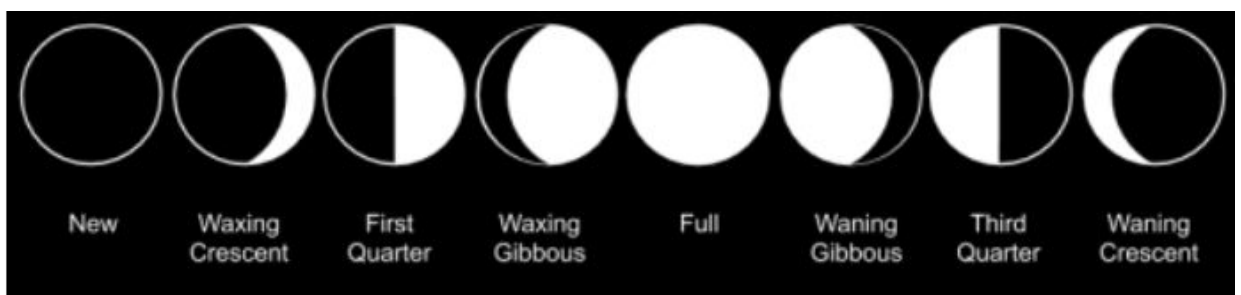
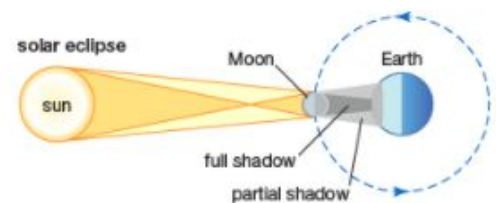
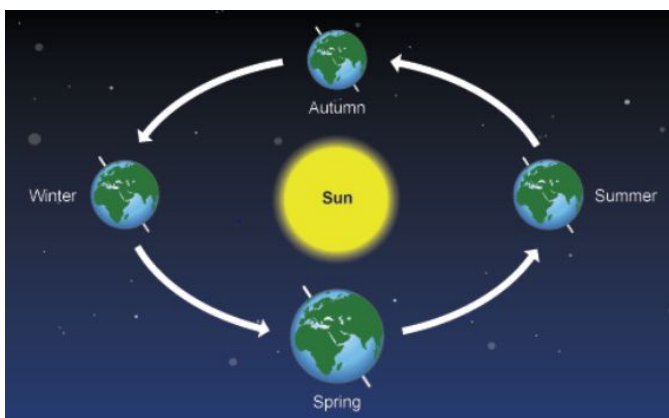


The Earth spins on its **axis** as it orbits the Sun. This spin takes 24 hours to complete. This creates day and night as different parts of the Earth face the Sun during the spin.

A year is 365.25 days on Earth. This is the time it takes to orbit once around the Sun. Every four years, there is an extra day (a leap year) to cancel out the four quarters.

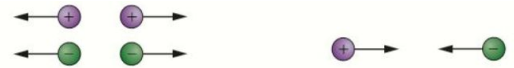
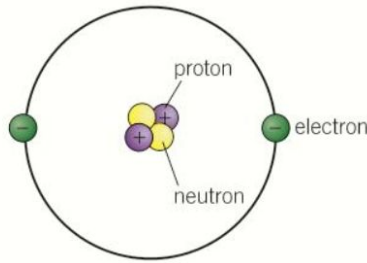
The seasons on Earth are due to its tilt. This means different parts of the Earth are facing towards or away from the Sun at different times as it orbits the Sun.

The Moon takes 28 days to orbit the Earth. As it does this, the Moon can be seen as different shapes called **phases**. There are 8 phases of the Moon. The Moon can also cause **solar eclipses** as it orbits the Earth.



Everything is made up of particles called atoms. Atoms in turn are made up of subatomic particles.

- Protons - positive charge (+)
- Electrons - negative charge (-)
- Neutrons - which have no charge.

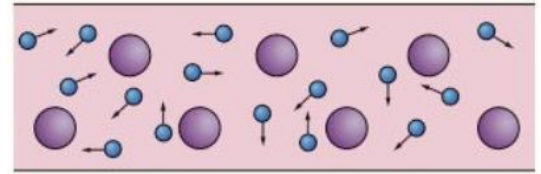
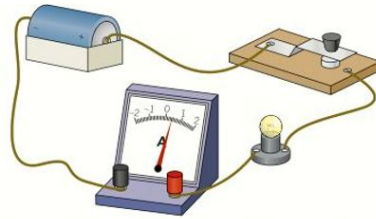


There are two types of electric charge positive charge (+) and negative charge (-).
 Positive charges repel positive charges
 Negative charges repel negative charges
 Positive charges attract negative charges.

What is current?

When you complete a circuit, charged particles move in the metal wires.

The current is the amount of charge flowing per second.



How do you measure current?

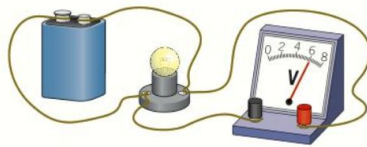
You can measure current with an ammeter.

- Current is measured in amps
- The symbol for current is A.

Where do the charges come from?

The battery does not produce the charges, they were already there in the wire. The battery pushes the charges around the circuit. The blue dots are the charges (electrons) which move around the circuit when connected to a battery.

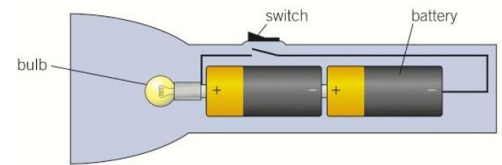
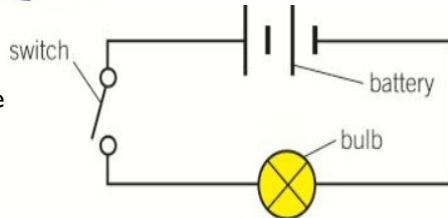
Electricity



What is potential difference (p.d)?

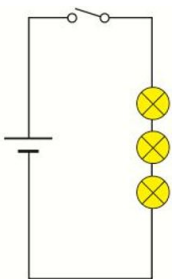
The potential difference across a cell tells you the size of the force on the charges. You can measure p.d. Using a voltmeter and is measured in volts (V). You can measure the p.d. Of a cell by connecting a voltmeter across it.

You use circuit symbols when drawing a circuit. A simple one is found to the right.



Series and parallel circuits - there are two types of circuit. The series circuit where all components are connected in series with one another, and a parallel circuit where there is more than one loop or branch.

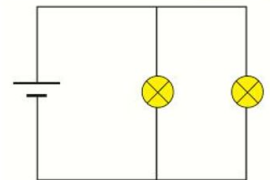
Series circuit



Current - series circuits contain only one loop, and the current is the same everywhere. Parallel circuits contain more than one loop and the currents in all the loops add up to make the total current.

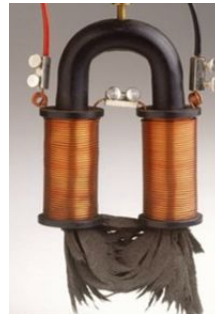
Potential difference (p.d.) - in a series circuit the p.d. across each component adds up to the p.d. across the battery. In a parallel circuit the p.d. across each component is the same as the p.d. across the battery.

Parallel circuit



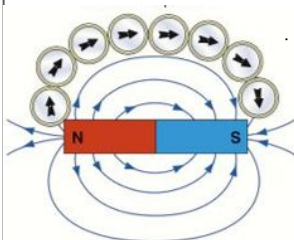
Resistance - each circuit component has a different resistance. This tells you how easy or difficult it is for the charges to pass through the component. Resistance is measured in ohms (Ω). You can calculate resistance using this equation.

$$\text{Resistance } (\Omega) = \frac{\text{potential difference (V)}}{\text{Current (A)}}$$



Electromagnets - A current flowing in a coil of wire wrapped around a magnet material is an electromagnet. It behaves like a bar magnet but you can turn it off. To increase the strength of an electromagnet you

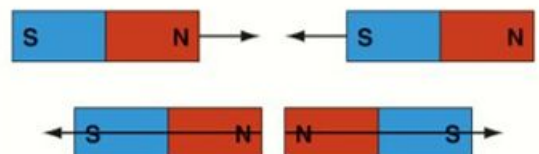
- Increase number of turns
- Increase current
- Use an iron core



Magnets and magnetic fields

Magnetic materials feel a force in the region around a magnet called a magnetic field. Magnetic field lines show the pattern of the magnetic field.

Magnets have a north and a south pole. Like poles repel and unlike poles attract.



The Gunpowder Plot was one of the most famous attempts to kill a king in British history. A group of men, including one named Guy Fawkes, planned to blow up the Houses of Parliament. They were caught before they could carry out the plot, however. Every year on the anniversary of the plot, people in the United Kingdom celebrate the fact that the plot failed. The celebrations include bonfires and fireworks.

The men plotted to kill not only the king but also the queen, their son Prince Charles, and every member of the government during the state opening of Parliament on November 5, 1605. The leader of the group was a man called Robert Catesby. Cellars beneath the Houses of Parliament were rented out as storage spaces to people such as coal merchants, and the gang leased one of these cellars. They gradually moved in 36 barrels of gunpowder and hid them there. It was enough gunpowder to blow up hundreds of people.

The men who planned the Gunpowder Plot were Roman Catholics who were unhappy with the way they were being treated. James I, the first of the Stuart kings of England, came to the throne in 1603. At the time, there were many conflicts between Protestants and Roman Catholics. James succeeded Elizabeth I, a Protestant, who did not allow Catholics to practice their religion as they wished. Roman Catholics in England expected James to treat them well because his mother was a Catholic. Instead, he ordered all Catholic priests to leave England. The men were furious that their hopes of religious tolerance had been dashed.



The night before the opening of Parliament, soldiers caught Guy Fawkes in the cellar. They arrested him and took him to the Tower of London. After three days of torture, Fawkes told his captors the names of his fellow plotters. They were all arrested for treason—plotting against the king and the country—and were imprisoned in the Tower.

On January 30–31, 1606, the whole gang was executed as hundreds of people watched. Afterward their heads were cut off and displayed on poles throughout London, to warn others what would happen to them if they plotted against the king. In celebration of his survival, James ordered that the people of England should have a great bonfire on the night of November 5, which is now known as Guy Fawkes Day.

Guy Fawkes and the Gunpowder Plot

Witches and the Kings and Queens of England.

Many of England’s royalty had strong feelings about witches and the dangers they posed to people around them. This timeline shows some of the laws they introduced and why.



Henry VIII was the first monarch to decide that witchcraft was a punishable by death.



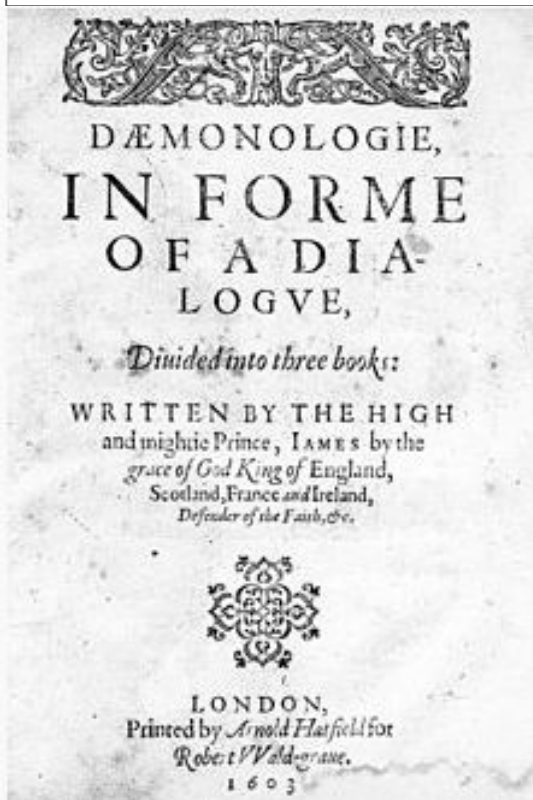
Edward VI repealed (got rid of) the act (or law) that his father had put in place, because he believed witches did not exist and were superstitious nonsense.



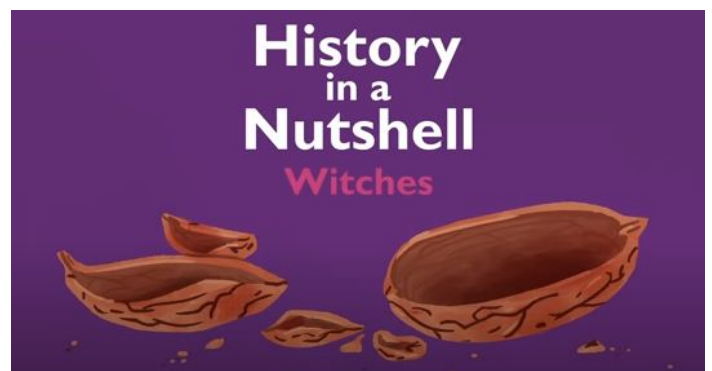
Elizabeth I introduced her own Witchcraft Act in 1563. It had two key points; 1. Witches who had caused actual harm would suffer the death penalty, and 2. Witches who had committed lesser offences would face time in prison.



James I changed the Witchcraft Act so that the death penalty was given to anyone found to be ‘invoking evil spirits or communing with familiar spirits’.



Title page of a copy of James’ book *Daemonologie*, republished in 1603.



Watch this clip on YouTube (<https://www.youtube.com/watch?v=ni6JiydG2w&app=desktop>) **to help you understand why people have been afraid of witches throughout history.**

Witches

Key Words:

Civil War - a war between people from the same country

Crime - something against the law

Daemonologie - a book written by King James VI of Scotland (later James I of England)

Devil - the spirit of evil (Satan)

Familiar - an animal looked after by a witch who helped them with their magic

Famine - not enough food grown

Justice of the Peace - trained officials who made sure everyone in their area obeyed the law

Misogyny - a hatred of women

Motive - the reason for doing something

Pact - a formal agreement

Parliament - the group of people who make laws for a country

Puritan - strict Protestants who wanted religion and worship to be simple and strict

Scapegoat - someone who is blamed for something that isn't their fault, usually because they are easy to accuse.

Trial - deciding whether or not someone is guilty, using evidence

Wise woman - a woman who knows about herbal remedies, healing magic or other traditional customs.

Witch - a person who is believed to have magical powers and uses them to harm other people or for evil.

Witchcraft - using supernatural powers to control people or events.



Source Analysis: Top Tips

Start with the main three questions:

1. What can I **see**?
2. What can I **infer**?
3. What **questions** do I have?

Then, think about how the source matches to your own knowledge

- What **matches** your knowledge?
- What is **different** or **unfamiliar**?

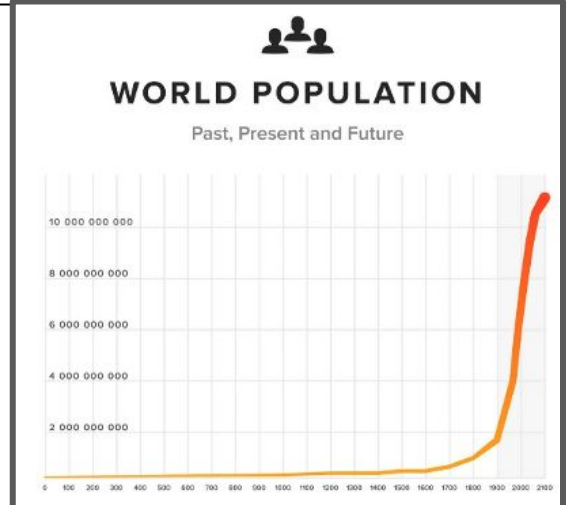
Next, examine **why** the source was made, **who** by and **what** it might mean.

- What is the source's **message**?

Witches

Population and Urbanisation

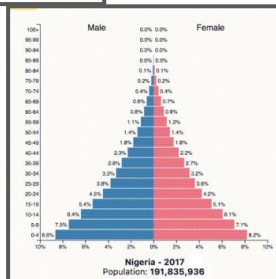
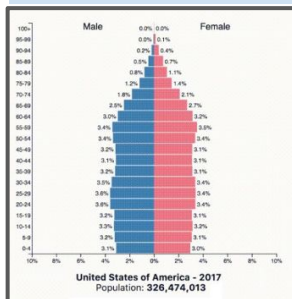
Population	The number of people living in a particular place
Population Distribution	The pattern where people live and how populations are spread out.
Birth Rate	The number of births per 1,000 of the country's population each year.
Death Rate	The number of deaths per 1,000 of the country's population each year.
Natural Increase/Decrease	The difference between the birth rate and death rate.
Underpopulated	When a country doesn't have enough people to make use of the resources and technology available.
Overpopulated	When a country has too many people and not enough resources to maintain a reasonable standard of living.



Why does population change unevenly around the world?

Settlements have built up in areas with natural resources that can support a population, such as water, soil, the ability to grow food and job opportunities. Areas that are often sparsely populated tend to have fewer resources and be harder to live in, such as mountainous areas, deserts or isolated places.

Population Pyramids



Population pyramids are used to analyse the structure of populations. They show the age and gender distribution of a given population. The shape of the pyramid depends both on the number of people in each age group and the proportion of males to females.

Demographic Transition Model

Stage	1 High stationary	2 Early expanding	3 Late expanding	4 Low stationary	5? Declining?
Birth rate	High	High	Falling	Low	Very low
Death rate	High	Falls rapidly	Falls more slowly	Low	Low
Natural increase	Stable or slow increase	Very rapid increase	Increase slows down	Stable or slow increase	Slow decrease
Examples	A few remote groups	Egypt, Kenya, India	Brazil	USA, Japan, France, UK	Germany
Reasons for changes in birth rate	Many children needed for farming. Many children die at an early age. Religious/social encouragement. No family planning.	Improved medical care and diet. Fewer children needed.	Family planning. Good health. Improving status of women. Later marriages.		
Reasons for changes in death rate	Disease, famine. Poor medical knowledge so many children die.	Improvements in medical care, water supply and sanitation. Fewer children die.	Good health care. Reliable food supply.		

China's One Child Policy

- In 1970 China's population exceeded 800 million, the world's largest population was growing too quickly.
- In 1979 the government introduced the one child policy. Couples were offered incentives – free education, better pensions, free child care and family benefits for one child.
- Problems with the policy: high rate of abortion and forced female sterilisations.
- The policy reduced the population by 400 million.
- In 2014, the policy was abandoned to balance population development and address the challenges of an aging population.

Population and Urbanisation

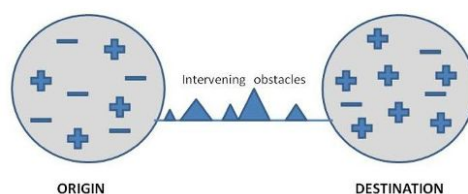
Migrant	Someone that moves from one place to another, with the intention of living temporarily or permanently in the new location.
Immigrant	Someone who moves permanently in a different country.
Voluntary Migrant	Someone who chooses to move to a different location.
Forced Migrant	Someone who has no choice but to move to a new location.
Refugee	A person who has been forced to leave their country in order to escape war, persecution or natural disaster.
Push Factor	Something that drives someone away from a certain place.
Pull Factor	Something that attracts someone to a certain place.
Urbanisation	The increase in the proportion of people living in urban areas.
Rural-Urban Migration	The movement of people from the countryside (rural) to towns and cities (urban) within a country.

Rural-Urban Migration

The reasons for rural-urban migration are:

- People moving into cities to find work
- Farming systems in rural areas changed to allow people to leave the group cooperative
- Newly industrialised areas needed workers
- There was a belief that standard of living is better in cities.

Lee's Push-Pull Theory



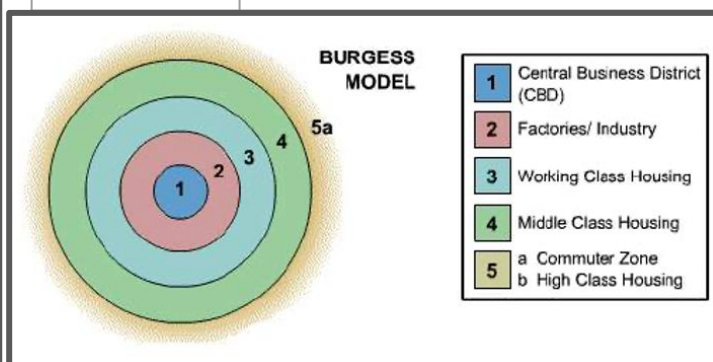
How did Urbanisation Change Bristol?

In the past Bristol docks was an important industrial area with shipbuilding and warehouses right in the centre of the city. Over time the docks became outdated and too small for big container ships. This led to the decline of the area around the docks.

During recent years the dockland area has undergone a big transformation. It is now known as **Bristol Harbourside** and contains many new functions. This is an example of **regeneration**.

Bristol Harbourside today contains:

- Expensive loft apartments and waterside housing
- Bars and restaurants
- Hotels
- Public squares and artwork
- Exhibition centres and museums
- Leisure functions e.g. sailing and a caravan park.



1 – Central Business District (CBD). Inner area, no regular street pattern, high density buildings. Now centre for shops and offices.

2 – Inner City. Rectangular grids of streets. Often high density, terraced housing. Built near to factories for workers.

3 – Inner Suburbs. Housing estates often filling gaps between main roads, widely spaced. Often semi-detached housing.

4 – Outer Suburbs. Modern estate, curved roads, cul-de-sacs, widely spaced. Often detached housing.

Evil and Suffering Year 8



Good	Characteristics/acts/things that are considered to be morally right. Eg. Kindness
Evil	Characteristics/acts/things that are considered immoral, wicked or wrong.
Forgiveness	To pardon a wrongdoing, to give up the desire to seek revenge.
Free Will	The beliefs that people can make their own decisions and choices, nothing is predetermined.
Justice	Fairness, when everyone is equal and has equal provisions and opportunities. Eg. A fair punishment.
Morality	Principles, values that determine which actions are right or wrong.
Punishment	A penalty given to someone for a crime or wrong they have done. Eg. Prison.
Sin	An act against God, an immoral action breaking a religious or moral law. Eg. Murder
Suffering	Pain or distress caused by injury, illness or loss. Can be physical, emotional, psychological.

What is Evil?

Moral Evil - Suffering and Evil caused by Humans behaving in a way which is morally wrong

Natural Evil - Suffering and Evil caused by natural events such as tornadoes, floods and earthquakes. These cannot be affected by human action



Nature Vs Nurture

The question is why are we the way we are? Are people born evil? Some people believe it is nature – that human behaviour is something to do with our biology. Others argue that it is how we are raised, our environment and upbringing.

Arguments for Nature: Humans have the same basic genes, makes sense that all humans would behave in a way. Some people commit evil who have had wonderful childhoods – what else could explain this?

Arguments for Nurture: If it was nature, people from all over the world would act the same? People not raised by people do not instinctively act like humans. Often people who commit evil have had trauma in their early lives – shows impact of upbringing. If it was nature then human behaviour would not have changed over history – it has changed vastly.

Evil and Suffering Year 8



Most religious believers, particularly Christians believe that God is all-loving, all-powerful, all-knowing and everywhere.

This can pose a problem, why would a God so spectacular allow his creations to suffer. This problem is known as:
The Problem of Evil



What do atheists argue about evil?

Atheists do not believe that God causes suffering; they believe evil is proof that God doesn't exist. They say that no loving God would let his creations struggle through pain.

They argue that if God was truly omnibenevolent, omnipotent, omniscient or omnipresent that God would prevent evil. If not then God would be evil.

IS God wanting to stop evil, but can't?

Then he is not all-powerful. Can he, but doesn't want to?

Then he is not all-loving.

Can he and does he want to?

Then why is there evil?

Is he not able and doesn't want to?

Then why call him God?

les matières

l'anglais – English
 le français – French
 Le dessin – art
 Les maths – maths
 Les sciences – science
 La musique – music
 L'informatique – ICT
 Le théâtre – drama
 La technologie – DT
 La géo(graphie) – Geography
 L'histoire – history
 Le sport / l'EPS – PE
 L'éducation religieuse - RE



qu'est-ce que tu fais?

je fais – I do
 on fait – one does/ we do

Ton opinion



Tu aimes....? – Do you like...?
 J'aime... – I like
 J'adore... – I love
 Je n'aime pas... – I don't like
 Je déteste... – I hate
 Quelle est ta matière préférée? What is your favourite subject?
 Ma matière préférée c'est.... My favourite subject is...

Pourquoi?

parce que /car – because
 mais - but
 C'est... It is....

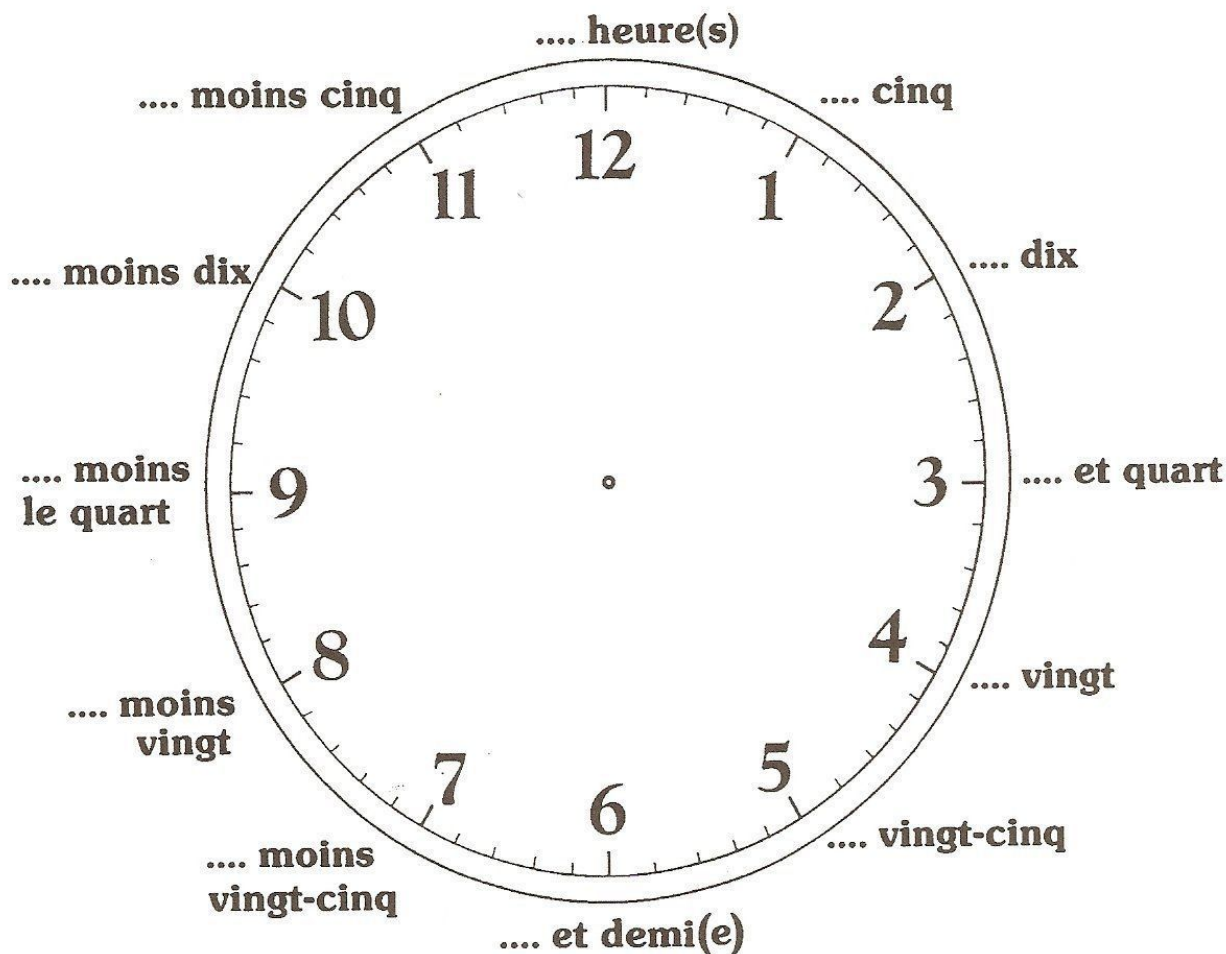
amusant – fun
 difficile – difficult
 facile – easy
 intéressant – interesting
 ennuyeux - boring
 nul – rubbish
 utile – useful
 bof! – blah! (indifferent)

je porte ... I wear
 on porte – one/we wear



une veste – a blazer	un pull – a jumper
un pantalon – trousers	une cravate – a tie
une jupe – a skirt	un collant – tights
une chemise – a shirt	des chaussettes – socks
un chemisier – a blouse	des chaussures - shoes

Quelle heure est-il?



Le collège commence à.. – school begins at...
 le collège finit à...- school finishes at..
 La récréation est à... - breaktime is at...
 le déjeuner est à... - lunch is at

Le lundi – Monday
 Le mardi – Tuesday
 Le mercredi – Wednesday
 jeudi – Thursday
 vendredi – Friday

puis – then après - after

Je me reveille – I wake up
 Je me lève – I get up
 Je me lave – I wash myself
 Je me douche – I shower
 Je m’habille – I get dressed
 Je me brosse les dents – I brush my teeth
 Je prends le petit déjeuner – I have breakfast
 Je vais au collège – I go to school
 Je dine – I have dinner
 Je fais mes devoirs – I do my homework
 Je lis – I read
 Je regarde la télé – I watch tv
 Je me couche – I go to bed

Define: Contraception

Methods that are used to prevent pregnancy from occurring during sexual activity.

Define: Hormonal methods

Contraceptive methods which use hormones to prevent pregnancy, usually used by women only.

Define: Barrier methods

Contraceptive methods which prevent pregnancy by stopping the sperm from reaching the egg.

Define: Sexually transmitted infections (STIs)

Sexually Transmitted Infections are infections that are passed on mainly through sexual contact both vaginally, anally or orally.

Sexually transmitted infections (STIs)

Some STIs can be treated using antibiotics - Chlamydia (bacterial infection), Gonorrhoea (bacterial infection), Syphilis (bacterial infection).

Others including genital warts, genital herpes and hepatitis B can have the symptoms treated but will not cure the infection.

Pubic lice can be treated with cream.

HIV has no immunisation although disease can be managed.

Be safe and be informed**Define: Sexual consent**

The giving of permission by a person to engage in any form of sexual activity including penetrative and oral sex. A person under 18 is a minor and legally a child.

Consent is freely given and you can change your mind. You do not need to do anything you feel uncomfortable with. Sexual consent can not legally be given if you are under 16

Where can you get help and support

- Parent or trusted family member.
- GP or practise nurse or school nursing team
- NHS online or other websites including www.brook.co.uk
- School staff/safeguarding team

Relationships / sex education - sexual health and safe sex

Define: Alcohol

While some drinks have more alcohol than others, the type of alcohol in all alcoholic drinks is the same – it's a type of alcohol called ethanol. Alcohol is a colourless, odourless and inflammable fluid.

Define: Binge drinking

Consuming large quantities of alcohol in a short space of time. This is 8 units in a single session for men and 6 units in a single session for women.

Alcohol and the law

It is against the law

- To sell alcohol to someone under 18 anywhere.
- For an adult to buy or attempt to buy alcohol on behalf of someone under 18.
- For someone under 18 to buy alcohol, attempt to buy alcohol or to be sold alcohol.
- For someone under 18 to drink alcohol in licensed premises.
- For an adult to buy alcohol for someone under 18 for consumption on licensed premises.
- To give children alcohol if they are under five.

It is not illegal: • For someone over 18 to buy a child over 16 beer, wine or cider if they are eating a table meal together in licensed premises at the discretion of the manager.

- For a child aged five to 17 to drink alcohol at home or on other private premises.

How alcohol affects you

Based on a standard (175ml) 13% volume glass of white wine or 4% strength pint of lager, 1 glass of white wine or a pint of lager (just over 2 units):

- You're talkative and feel relaxed.
- Your self-confidence increases.
- Driving ability is already impaired, which is why it's best to drink no alcohol if you're driving.

The more alcohol you drink the less inhibited you feel and the shorter your attention span. As you drink:

- Your blood flow increases.
- You start dehydrating, one of the causes of a hangover.
- Your reaction time is slower.
- Your liver has to work harder.
- You're may become noticeably more emotional.
- Your judgement is impaired.

Stay safe, make sure you stay in control.

Define: Smoking

The action or habit of inhaling and exhaling the smoke of tobacco or a drug. Usually through cigarettes or cigars.

Define: Vaping

The action or practice of inhaling and exhaling the vapour produced by an electronic cigarette or similar device.

Smoking and the law

You must be over 18 to buy cigarettes in the UK. If you're under 16 the police have the right to confiscate your cigarettes.

It's illegal:

- For shops to sell you cigarettes if you are underage
- For an adult to buy you cigarettes if you are under 18
- To smoke in all public enclosed or substantially enclosed area and workplaces.
- To smoke in a car with a child.

Vaping and the law

You must be 18 or over to purchase e -cigarettes or e - liquids in the UK.

It also became illegal for an adult to buy e-cigarettes for someone under the age of 18.

- Although there is no legal restriction on where you can vape in the UK there are local laws and bylaws in force that prohibit the practice.

The choice of whether or not to allow vaping is that of the property owner.

- Vaping generally is not allowed on the underground, planes, buses or trains and train stations in the United Kingdom.
- Vaping while you drive may not seem like such a big deal but it could land you with up to nine penalty points and up to a £2500 fine.

Risks of smoking

- Smoking can damage every part of your body
- It can lead to different types of cancer including lung, throat, mouth and stomach among others
- It can lead to other chronic health problems including heart disease, stroke, chronic lung disease, reduced fertility, asthma and gum infections.

Risks of vaping

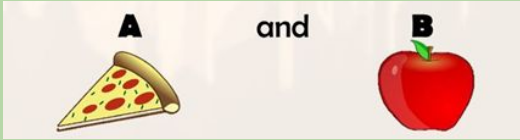
- Mouth and airways - Mouth irritation, restriction in airway and cough.
- Heart and circulation - Chest pain, increased blood pressure and increased heart rate.
- Stomach - vomiting or nausea

Long term effects are still not fully known

FORM AND STRUCTURE

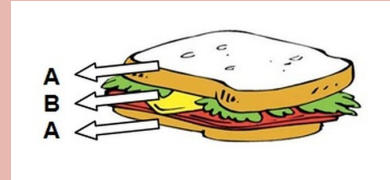
The **FORM** or **STRUCTURE** is the overall plan of a piece of music.

BINARY FORM (AB)...
 is a musical structure with **TWO contrasting** sections. The first section is labelled as **A** and the second section is labelled as **B**. Sometimes, the sections are repeated.



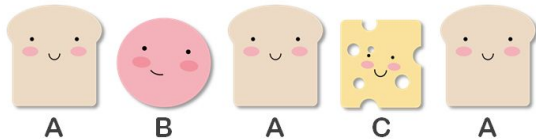
Listen to 'Overture' from Messiah by Handel. You should hear a clear change in the music. How do the two sections **contrast**?

TERNARY FORM (ABA)...
 is a musical structure with **THREE** sections. The first and third section are labelled **A** and are very similar. The middle section **B** **contrasts** with the two outer sections.



Listen to 'Hornpipe' from Water Music by Handel. Can you hear when the 'A' section returns?

RONDO FORM (ABACABA)...
 is a musical structure in which the main theme (**A**) keeps returning in between **contrasting** episodes (**B, C**).



Listen to 'Presto' (movement IV) from The Joke Quartet by Haydn. Can you hear when the main theme returns? Why do you think it might be called The Joke Quartet?

VERSE CHORUS FORM...
 is a musical structure that is common in popular music. It is built using two contrasting sections - the **VERSE** and the **CHORUS**.

The chorus is repeated several times throughout the song and contains the song's most memorable melody, called the **hook**.

There are sometimes other sections present in verse chorus form: **intro, pre-chorus, bridge** and **outro**.

Listen to 'Your Song' by Elton John and follow the outline of the structure below.

Have you noticed that in each of the structures above, there is an element of **REPETITION** and/or an element of **CONTRAST**?

Repetition is where a section of the music is repeated.

Contrast is where one section of music is different to another.

There are a number of ways in which composers/songwriters create contrast between sections. These include: **low pitch/high pitch; a change in texture/instrumentation; shorter notes/longer notes; a change in tempo (speed).**

Verse/Chorus Form

- Elton John's "Your Song":



- Intro
- Verse 1: "It's a little bit funny..."
- Chorus: "And you can tell everybody..."
- Verse 2: "I sat on the roof..."
- Chorus: "And you can tell everybody..."
- Outro

READING NOTES ON THE TREBLE CLEF

Treble Clef Notes

Line Notes
 E G B D F

Space Notes
 F A C E

TIPS FOR READING NOTATION

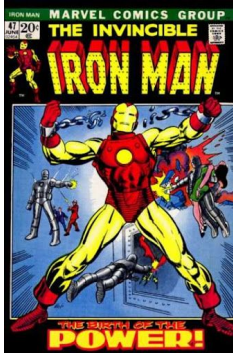
- Learn a rhyme to help you remember the order of the notes on the **LINES**, such as **EVERY GREEN BUS DRIVES FASTER**.
- Remember the rhymes always start at the bottom of the **staff (the five horizontal lines)**.
- Notice that the order of notes as you move up the scale is **ALPHABETICAL ORDER**, ending with **G**.

DRAMA

Acting Skills

Facial Expressions	Showing emotion with your face
Body Language	Showing emotion with your body
Posture	The way in which you hold your body. Posture can be used to show age, emotion, and status of character
Focus	Where you are looking, who you use eye contact with, or refuse to use eye contact with can show a huge amount about your character's confidence and emotions
Weight Placement	Weight placement is about changing your centre of gravity to bring your weight onto specific parts of the body. For example if you lean forward the weight is brought onto the front of your feet, if you lean to the side =your weight placement goes down the leg on the side you are leaning. This can be used to show gender, age and even personality.
Gesture	Small movements that convey meaning. For example a nod of the head means 'Yes' or thumbs up to say you are feeling good.
Pitch	How high or low your voice is
Projection	How loud or quiet you are. Remember it is just as bad to be too loud in the drama room as it is to be too quiet in the hall.
Pace	How quickly you speak.
Intonation (tone)	The emotional tone of your voice.
Clarity	How clearly you speak
Articulation	The movement of the lips and tongue to help you speak clearly.

KEY ELEMENTS

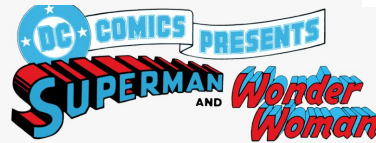


COMPOSITION

This is how all of the front cover elements are put together. The title, the character, the background and any other information.

TITLE

The main title of the comic book could be the character. This helps to attract the reader



OTHER

Consider the other elements that can be added to the design; edition numbers, price, barcode, explosions or more information about the story.



MATERIALS

Materials are really important for all type of things that you create. The material can give your product one of the most important finishes. When making your maks make sure you really focus on what materials you want to use and why those materials.



COLOUR

Colours are the first thing you see - they have to be eye catching for the reader.



CREATING YOUR SUPERHERO MASK

When you create your own mask you need to be thinking about what you can do to make it different to all the others out there. Thinking about your logo and how that can be used. How all your different colours will be used. How the fabric will look. Make sure you create something that looks really unique and stands out.

SAFETY

Ensuring your mask is safe is one of the top priorities that you need - how can you do this?

Making sure the fabric is secure

Making sure the strap won't come undone or fall off

Making sure all extra parts are secure pn to your mask

Making sure it's the correct size for your face

Warm ups and cool downs



Reasons for Warming up

Before we exercise it is important we prepare our body for exercise.

- Prepares you **physically** and **mentally** for exercise
- Increase **heart rate** and **blood flow /oxygen** delivery to **muscles**
- Increases the **body temperature** including temperature of muscles, tendons & ligaments
- It increases **flexibility** and **pliability** of **ligaments / tendons**
- Allows the performer to prepare on the **surface** they are playing on and gets them used to **environment** they will be performing in
- Increase speed of **muscle contraction**



Rules /Precautions

A good warm up should be a minimum of **10 minutes**. You should **gradually increase the intensity** of your warm up. You should perform exercises and skills that will be **replicated in the game**

Phases of a warm up

Phase 1

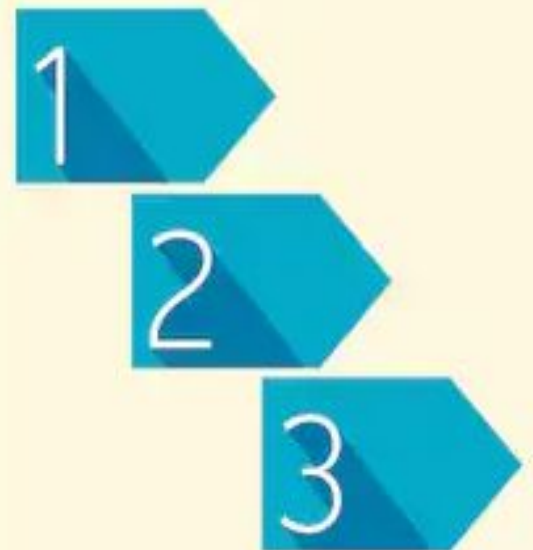
Pulse raiser: raises HR and speeds up oxygen delivery to working muscles

Phase 2

Stretching and mobility: increases elasticity and range of movement

Phase 3

Skills activity: more intense practices relating to the main session



Warm ups and cool downs

Example of an appropriate warm up.

Key Components of a warm up:

- **Pulse Raiser** (5 minutes)– A steady jog around the outside of a pitch at the speed you can chat to someone. Start slowly and increase the pace over time.
- **Mobility and stretching** – Start by mobilizing the muscles and joints, pay particular attention to the muscle groups you will be using in the sport or activities. (knee raises, side steps, high kicks, lunges)
- **Skill Rehearsal** – Skills practice that replicated what you will do in the activity or sport (e.g. Square passing in football, chest passes in netball, rally in badminton)

Cool downs

After exercise it is important you cool down properly using the key components of a cool-down listed below:

Cool downs should be:

- Low intensity exercise – slow jog
- Stretching – using static and dynamic stretches for a hold of 30 seconds or more

Physical benefits of a cool down:

- Helps body's transition back to rest
- Gradually lowers heart rate
- Gradually lowers temperature
- Circulates oxygen and blood
- Gradually reduces breathing rate
- Increases removal of waste products (lactic acid)
- Reduces risk of DOMS (Delayed Onset of Muscle Soreness)
- Helps recovery by stretching



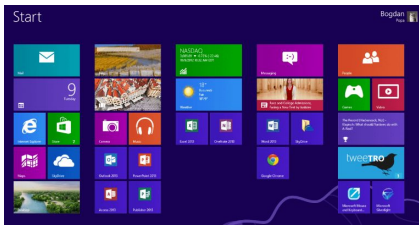
USER INTERFACES

A User Interface (UI) is what enables us (the users) to interact with a device. Without a user interface, you would need a working knowledge of binary, mathematics and electronics in order to be able to use a computer. User Interfaces help you input data and understand the output.



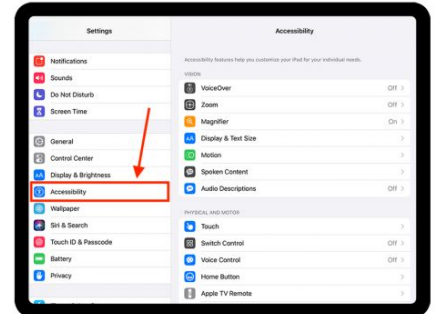
Graphical User Interfaces (GUIs)

Graphical User Interfaces are used by most desktop computers, laptops and smartphones. They use a combination of **windows, icons, menus and pointers** (WIMPs) to help users to find their way around the system. GUIs are widely used because they are considered to be **intuitive**, meaning that the users can work out what they need to do just by looking at it.



Accessibility

Most UIs have a range of built in accessibility features which help people with disabilities to use them.

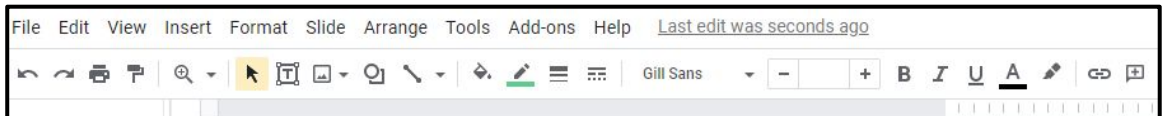


These features are usually available in the settings menu under Accessibility or Ease of Access and include:

- Adjustable text size
- Magnifier
- Text to Speech/Immersive Reader
- Invert colours
- Assistive Touch
- Speech recognition

Intuitive Design

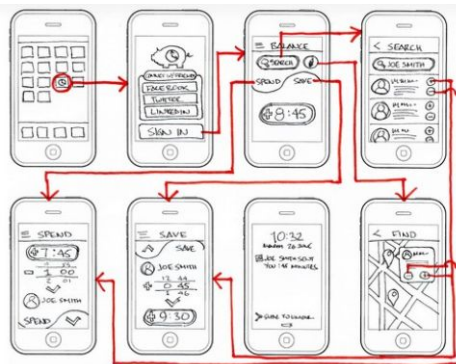
Most UIs group similar objects together in the menus or on the **ribbon** to make it easier for the user to find them. The accessibility options are all together in the settings menu and the font formatting tools are all grouped together in Slides or PowerPoint.



The UIs also have different ways of giving the user feedback. Error messages and warnings tell a user if something is wrong or if they are about to do something they can't undo. Links and buttons often change colour so that the user knows that the computer is processing the action.

Storyboards

Before making the UI, the designers will sketch out storyboards that show what the screens look like and how they are linked.



The plan will then help everyone working on the project understand what they are making and how it will work.

Storyboards make sure that nothing is left out.

Keywords

Graphical User Interface (GUI)

Interact Windows Menus

Accessibility Icons Pointers

Ribbon Intuitive Storyboard

Input Output Adjustable

Magnifier Invert Assistive

PORTRAITURE

Portraiture is a huge area of art, with many different approaches and styles. Here are some key artists:

Russ Mills is a contemporary British artist. He often combines animal and human faces. How do you think he intends this portrait to make you **feel**?



Peony Yip is an illustrator living and working in Hong Kong. She combines human and animal faces, overlaying them rather than merging them together. How would you describe this effect?



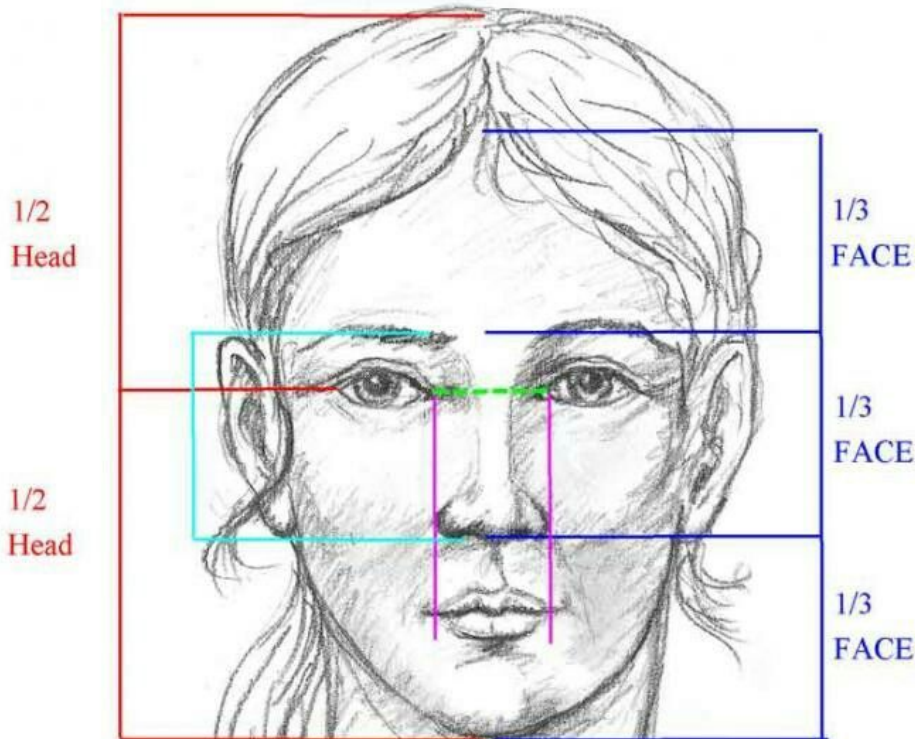
In this study of a girl, by **Leonardo Da Vinci**, notice how he uses **tone** to make the head feel solid, and the features soft.

In this portrait by **Alexej von Jawlensky**, painted in 1930, he has not tried to make it realistic. Instead, he used colours to show the emotion. This is known as **expressionist**.



PORTRAITURE

BASIC FULL FACE PROPORTIONS



The importance of proportion:

Usually when we start drawing faces, we get the proportions incorrect. Common mistakes include having the eyes too far up the face, and too large. Study this diagram carefully to help you improve.

The eyes are halfway between the top of the head and the bottom of the chin. The FACE is divided into 3 parts: from hairline to eyebrow, from eyebrow to bottom of nose, from nose to chin. The distance between the eyes (In green) is approximately the width of **one eye**. This is the same width of the nose (and to some extent, the mouth at rest) The ear length is from the eyebrow to the bottom of the nose. (In light blue)

Key concepts:

Features - the nose, mouth, ears and eyes

Proportion - the relationship between height, width and position of these features

Form - the appearance of three dimensional depth

Tone (shading)- use of light and dark to create the illusion of form

Profile - the view of the side of the face

Composition - how the artist chooses to arrange the elements of the image onto the paper

Realist portrait- accurately portraying the visual appearance of the person

Expressionist - portraying the feeling or personality, rather than the appearance of the person, often through use of colour.

Nutrients

What are Nutrients?

Nutrients are the building blocks that make up food and have **specific** and **important roles to play in the body**. Some nutrients provide **energy** while others are essential for **growth** and **maintenance of the body**.

Macro Nutrient

Macro Nutrient	Role in the Body	Food Example
Carbohydrate	The main source of energy for the body.	Bread, rice, pasta, potatoes
Protein	Provides the body with growth and repair.	Meat, poultry, beans, eggs, lentils, tofu, fish
Fat	Provides the body with insulation and a small amount protects vital organs. Provides essential fatty acids for the body.	Butter, oil, cheese, cream, nuts, oily fish, crisps

Vitamins

Vitamin	Role in the Body	Food Example
A	Helps to keep the eyes healthy and strengthen the immune system.	Dark green leafy vegetables, carrots, liver
B	Helps to release the energy from the food we eat.	Bread, milk, cereals, fish, meat
C	Help with skin healing and healthy skin. Help with the absorption of Iron.	Fresh fruit, broccoli, tomatoes
D	Important for absorbing calcium and help with healthy bone structure.	Oily fish, eggs, butter, sunshine

Vitamins - Help to keep our immune system up and help our body to stay healthy - they are important for body maintenance.

Minerals

Mineral	Role in the Body	Food Example
Calcium	Important for strong teeth and bones. It also helps with blood clotting.	Milk, yoghurt, soya, dark green leafy vegetables
Iron	Needed for red blood cells which help to transport oxygen around the body.	Nuts, whole grains, dark leafy vegetables, meat, liver

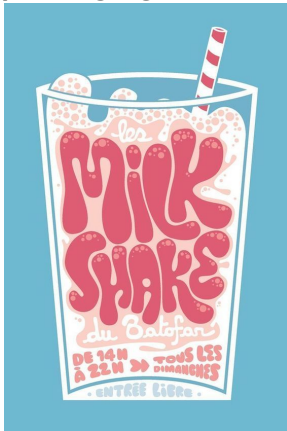
Minerals - Help to keep our immune system up and help our body to stay healthy.



What is Typography?

Typography is the style or appearance of text. It can also refer to the art of working with text—something you probably do all the time if you create documents or other projects for work, school, or yourself.

Typography is everywhere we look. It's in the books we read, on the websites we visit, even in everyday life; on street signs, bumper stickers, and product packaging.



Serif or Sans Serif?

serifs
Text

Serif Font

Serif fonts have little strokes called **serifs** attached to the main part of the letter. Because of their classic look, they're a good choice for more traditional projects. They're also common in print publications, like magazines and newspapers.

Text

Sans Serif Font

Sans serif fonts don't have that extra stroke—hence the name, which is French for without serif. This style is considered more clean and modern than serif fonts. Also, it tends to be easier to read on computer screens, including smartphones and tablets.



STREET DANCE



The aim of this terms learning is to introduce to you a new dance genre/style called Bboying and for you to know where it fits into the Hip Hop culture. You will need to produce and perform this style of dance in your assessment demonstrating a good understanding of the key moves, traditions and its cultural context.

WHAT IS HIP-HOP?

Hip hop music, also called hip-hop or rap music, is a music genre formed in the United States in the 1970s that consists of a stylized rhythmic music that commonly accompanies rapping, a rhythmic and rhyming speech that is chanted. It developed as part of hip hop culture, a subculture defined by four key stylistic elements: MCing/rapping, DJing/scratching, break dancing, and graffiti writing. Other elements include sampling (or synthesis), and beatboxing.

A LIST OF BBOY MOVES:

Use YouTube and type in the bboy moves listed below. Find tutorials and try and embody some of these actions.

Top Rock:

Apache Step (commonly known as Indian Step)



Kick Step

Charlie Rock



Footwork:

6 Step

Helicopter/Coffee Grinder



Ci-Ci

Drops:

Knee Drop

Jump to Knee Slide

Top rock drop



Freeze:

Baby Freeze



HISTORICAL CONTEXT AND DEVELOPMENT OF B-BOYING

The words 'Break Boy and Break Girl' originated from the Bronx of New York. In the early 70's Dj Kool Herc would play the 'breaks' of songs. Meaning, he would only play parts of the songs where it was beat only, no lyrics. This would excite the people to dance. So in turn girls and guys who danced to these 'breaks' were called 'Break Boy and Break Girl' or 'B-Boy; B-Girl' in short. B-boying started with the James Brown's 1969 "Get on the Good Foot". When on stage James Brown would dance around with such energy and almost acrobatic moves, many people began mimicking his moves, so they called it the "Good Foot". The 'Good Foot' was mainly dancing around that involved drops or spins on the floor. Thus, the beginning evolution of breaking. During the 1970's martial arts were also very popular, so B-Boys (for the most part) incorporated martial art stunts to 'wow' the crowds. And today b-boying has evolved into a highly demanding dance physically and mentally. With massive b-boy dance competitions being held around the world, such as BOTY (Battle of the Year) in Germany and the FreeStyle Sessions.

CHOREOGRAPHY, REHEARSAL AND PERFORMANCE



Evaluating your dance work?
 Try these **sentence starters** to help you reflect and appreciate your work:



I would like to tell you about.....
 I would like to explain about.....
 I have choreographed.....
 My dance was about.....
 This term I have learnt.....
 I am pleased with my finished performance because....

The most enjoyable part of the work was.....
 The area I found the most challenging was.....
 I am now aware of.....
 The equipment/resources I have used are.....
 I would develop my work by.....
 I would like to use this (insert: technique, idea, development or method) in my future projects because.....

The key focus this term was.....
 Important things to remember are.....
 I have learnt how to.....
 I have planned.....
 The most enjoyable part of the work was.....
 I am able to use.....

DANCE

CHOREOGRAPHY

Use YouTube, type in and watch the famous dance crews listed below. Try and teach yourself some phrases/choreography that you liked the most from these crews and bring what you have learnt to class, as you could apply the choreography you have learnt to the phrases that you will be taught in class. This will expand your movement vocabulary and understanding of this dance genre/style.

- Diversity**
- Flawless**
- Project G**
- Rock Steady Crew**
- Zoo Nation**
- Twist and Pulse**

Analyse the following in what you watch:

- Action content - what key moves are they performing?
- Dynamics performed - How are they performing the actions you have identified?
- Space used - how are they using the space around them in the choreography?
- Relationships - how are they dancing with one another? Unison? In duets? Cannon?

REHEARSAL

- Warm up and stretch properly and correctly
- Mentally and physically prepare yourself for the rehearsal/lesson ahead
- Follow health and safety rules in dance and wear the correct attire
- Work with different group variations—1, 2, 3, 4, 5
- Aim to Input creative ideas
- Listen to the ideas of others
- Communicate effectively and calmly with others
- Take the lead in groups
- Be a team player – Teamwork
- Try to show and maintain commitment to your work
- Focus at all times
- Repetition is key, repeating your creative dance sequences will help remember your dance
- Identify yours and your groups strengths
- Identify areas for improvement to make progress in your dance work

PERFORMANCE

When you perform your dance assessment here are a list of skills that I will be looking out for in your dance:

- Movement Memory - remembering your dance
- Accuracy - copying exactly the actions you see
- Extension - stretching your limbs into the space
- Fluency - moving from one action to the next without pauses
- Posture - how you hold your body when sitting/standing
- Spatial Awareness - knowing where you are in the space
- Strength - muscle power needed to perform movements
- Focus - use of the eyes looking at other dancers, the audience or to a body part
- Facial Expression - emotion shown through eyes, mouth and eyebrows
- Sensitivity to others - in space, group formations, when in contact
- Commitment - considering work as a performance piece
- Application of stylistic features and appropriate dynamics

How do the challenge tasks work?

Each term, five subjects will set additional challenge tasks. These tasks are optional so you can pick and choose which ones you do. For each task that you complete, you will be rewarded with 5 epraise points and be entered into a draw to win a prize.



Your class teacher will give you details of how and when you should hand in the task

ENGLISH

Optional Challenge Tasks

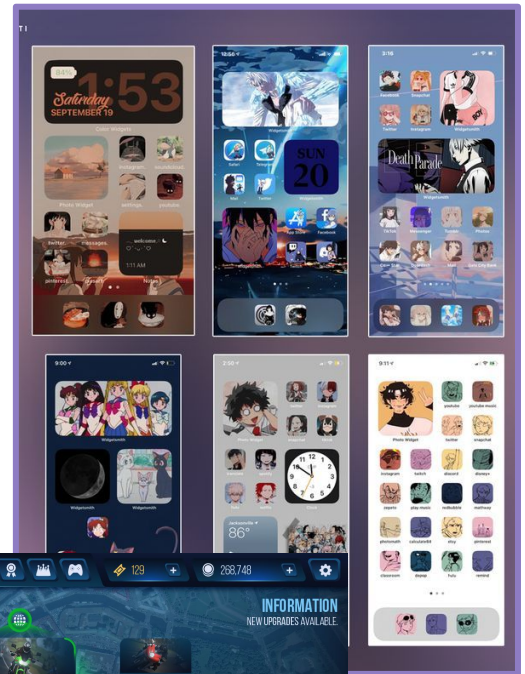
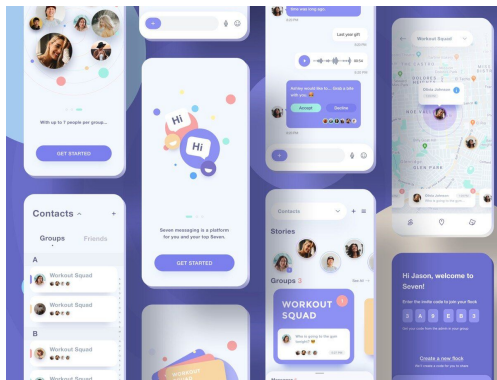
1. Create a timeline which shows the history of the Gothic genre ensuring you include favous books and writers.
2. Read a Gothic story and write a review which also highlights how it suits the Gothic genre.
3. Imagine that you are walking through a Gothic building and describe what you see.
4. Create a Character Profile on a Gothic character you have been introduced to in this unit.
5. Find an image of a dark cave online. Inspired by this picture, write a Gothic description of walking into a cave.
6. Look around you at the room you are in. Describe a Gothic version of this room. How will you have to change it?
7. Imagine a Gothic dream. Draw a storyboard of this dream. Remember that odd things can happen in dreams! Write a paragraph explaining why it's Gothic.

ICT

Design a brand new UI

You could create a design for your a new social media site or maybe redesign the UI for your favourite computer game. You could even design a new home screen for your phone!

The designs could be sketched on paper or created using Google Slides just like the ones we're doing in class. The choice is yours.



HISTORY

Challenge: Use the information on Guy Fawkes and the Gunpowder Plot and some of your own research to complete the following task:

Imagine you are an ambassador (someone who represents a foreign country overseas) living in London - write a letter home reporting on the Gunpowder Plot. Remember to include lots of detail - you can even put in drawings if you want!

ART

This term you will be learning how to draw a portrait. To practice, draw yourself in a mirror. Start off by focusing on the overall proportions (see slide 40), then add the features. Remember to use your pencil very lightly. Once you have all the features in place, add tone by layering your pencil. Success =

- ★ Fill the page
- ★ The eyes are halfway down approximately
- ★ TONE

Tip - the areas **IN BETWEEN** the features are just as important as the features, so look carefully at the cheeks, chin and forehead. Portraiture is really hard! If your portrait looks like a realistic person, you have done **really well** - if it looks like you, you are a **genius!** Enjoy :)

DANCE

- Make a music video, try dancing and singing at the same time - Can you get your family involved?
- Draw a poster for a dance competition - Include: Location, Price, Date, Time and how to enter.
- Teach a member of your family four dance moves and let them teach you a few!
- Make a dance costume from materials in your house, take a picture and show us!
- Try a Hip Hop online tutorial in the following styles: Waacking, Tutting, Locking & Popping, Breaking