Hartford
Church of England
High School

CARITAS ET VERITAS

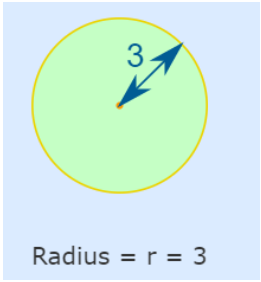
Year 8

Knowledge Organiser

Contents

Maths

Maths

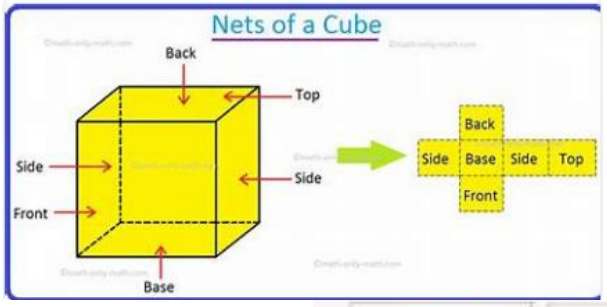


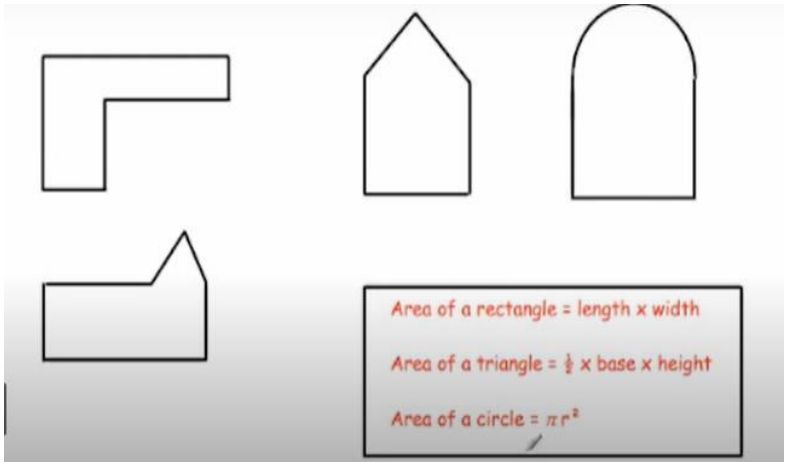
Area $= \pi r^2$

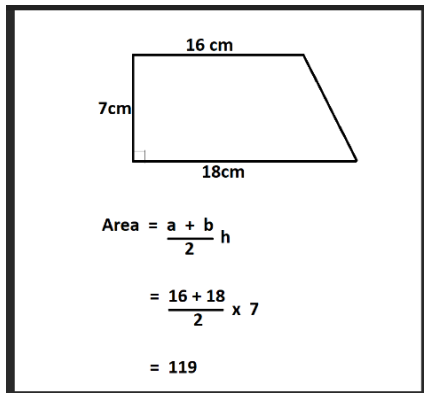
$= \pi \times 3^2$

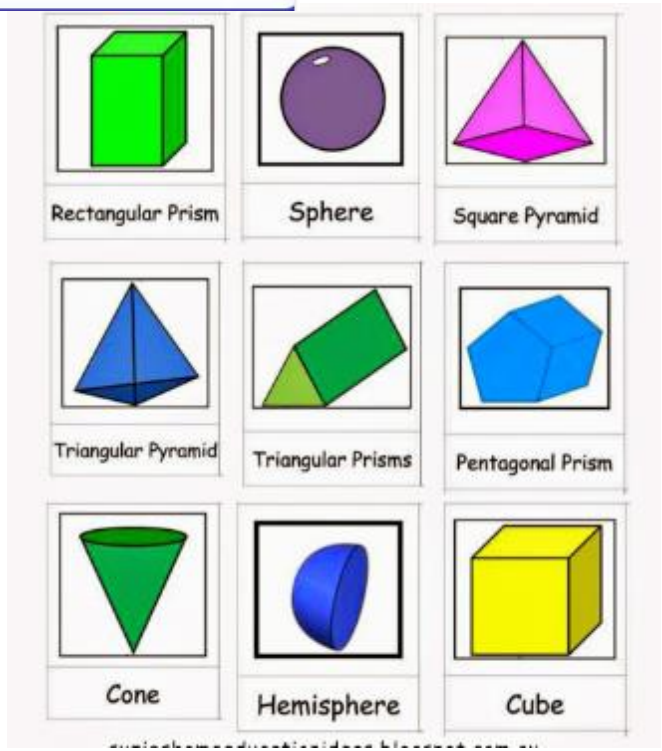
$= 3.14159... \times (3 \times 3)$

$= \mathbf{28.27\ m^2}$ (to 2 decimal places)





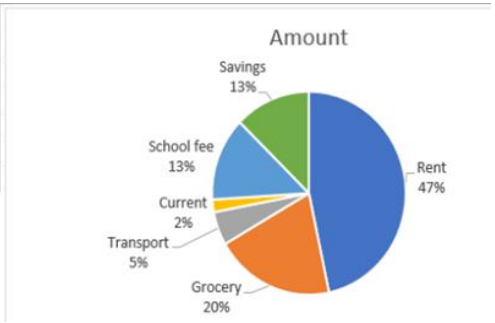




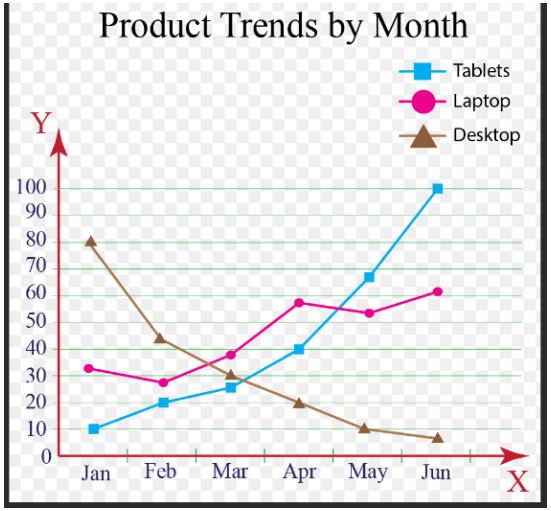
Divide the shapes into separate shapes
then work out the areas and add them together.

Example of a pie chart

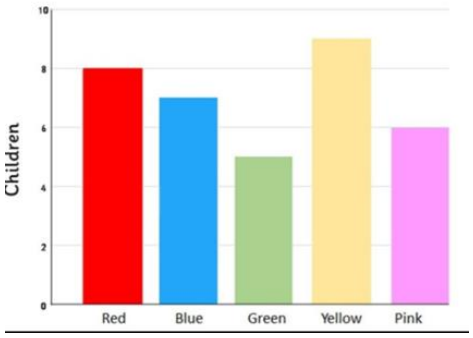
Expenses	Amount
Rent	7000
Grocery	3000
Transport	800
Current	300
School fee	2000
Savings	1900



Example of a line graph



Example of a bar chart



Averages

- **Mean**: the average, which is found by adding up all the values in a set of data and dividing it by the total number of values you added together.
- **Median**: the middle number in the set of values. You find it by putting the numbers in order from the smallest to largest and covering up one number on each end until you get to the middle.
- **Mode**: the number or value, which appears most often in the set. To find the mode, you need to count how many times each value appears.
- **Range**: the difference between the lowest and the highest value. To work it out, simply subtract the lowest value from the highest.


English

English - Othello

Characters

Othello, the **protagonist**, a **moor** and esteemed **general** of the Venetian army. Powerful and noble, he is nonetheless easily manipulated and overpowered by **jealousy** from within.

Iago, a **malcontent**. He is the General's ensign and, although his motives aren't always clear, he is manipulative and poisonous with his words and delights in the destruction of others' happiness.

Cassio, the newly promoted lieutenant, is the object of Iago's resentment. Here, he is used by Iago to stoke the fires of Othello's insecurities and **jealousy**.

Roderigo, whom Swinburne called a "tragicomic dullard", is desperate and foolish enough to give all his money to Iago to help him win Desdemona. In fact, Iago exploits him for his own ends.

Desdemona, the general's new wife. She is innocent and virtuous, but also dignified, assertive and self-determined when dealing with her father and her husband.

Emilia, long suffering wife of Iago, is attached to Desdemona. Like her husband, she is **cynical** and her attitudes often contrast with Desdemona. She helps, and then **betrays** Iago.

Bianca, a prostitute and Venetian courtesan. She is used by Cassio but her existence is also used to exploit Othello's insecurity.

Brabantio, father of Desdemona, is appalled by his daughter's marriage to a **moor**, viewing it as an act of theft or witchcraft by Othello. He views the act in **racial** terms and sees the marriage as a **betrayal**.

Themes

Jealousy: arguably the driving force for conflict in the play, as experienced by many characters, including Othello, Iago, Bianca and Roderigo. Shakespeare suggests that jealousy arises from insecurity. Shakespeare suggests that jealousy is exacerbated by duplicity and manipulations. Shakespeare suggests that jealousy and violence are intertwined. Jealousy causes even the most noble and self-disciplined of characters to behave irrationally and destructively.

Deception (appearance vs. reality): Shakespeare presents deception (lying) as one of the products of ambition and self-service. Deception signifies moral decline: Iago deceives others for his own ends; Othello is deceived and his integrity is lost. Shakespeare also suggests that everyone is capable of deception (both Emilia and Desdemona lie) but that those in power are particularly vulnerable. Shakespeare suggests that deception can be the result of reckless cruelty and 'motiveless malignity'. However, lies can be overcome (Emilia rectifies her previous deceit in the final scene) and lies can have moral purpose (Desdemona's final line is a lie delivered to save her husband and prove her love for him).

Prejudice: Shakespeare suggests that racial prejudice is pervasive and endemic in Venetian society (despite the honours conferred on him for service to the state, Othello is potentially ostracised when he marries Brabantio's daughter). Prejudice is also rooted in ignorance, hatred and fear. Shakespeare suggests that to define others (and one's self) based on racial prejudice is insidious. Iago's language conflates racial hatred and the idea of the sub-human 'other'.

Manhood and honour: Shakespeare suggests that masculinity is rooted in power, status and sexual confidence. Shakespeare suggests that manhood is linked to status and reputation, and when this is compromised, insecurities begin to fester. Fears about reputation preoccupy most of the male characters (Othello, Iago, Cassio, Brabantio and Roderigo) and the perils of falling from grace are repeatedly alluded to.

Love: Shakespeare suggests that love can transcend broader societal issues, cultural divisions and hierarchical conventions. Shakespeare suggests that love is intense but also fragile. Shakespeare suggests that love can be manipulated, and that even the deepest trust can be unravelled.

Plot Summary

Iago is furious about being overlooked for promotion and plots to take revenge against his General; Othello, the Moor of Venice. Iago manipulates Othello into believing his wife Desdemona is unfaithful, stirring Othello's jealousy. Othello allows jealousy to consume him, murders Desdemona, and then kills himself.

Context

From the eleventh to the fifteenth century, Catholics battled to re-conquer Spain from the Islamic Arabs and Berbers, or Moors, who had successfully occupied it since the 900s. The struggle inspired intense prejudice and suspicion that lasted well after the Moors were overthrown. Philip III of Spain expelled 300,000 "Moriscos" from the Iberian (Spanish) peninsula not long after Shakespeare finished *Othello*, in 1609. In England during Shakespeare's time, views regarding "Moors" were slightly more complex because of strong anti-Catholic sentiment in England and English fears of invasion by the Spanish. In fact, England maintained independent trade relationships with "Moorish" Northern Africa, despite Spanish and Portuguese protest. The English slave trade also brought blacks to Europe, from mid-sixteenth century onward. Queen Elizabeth herself founded The Barbary Company, formally institutionalizing this trade; in addition, she received a delegation of Moroccan diplomats in 1600. However, the English still felt a strong suspicion of Islam: Elizabeth issued a degree expelling Moors from Africa and Spanish "Moriscos" from the boundary of England in 1599 and 1601.

Shakespearean Translations

Anon– It sounds like a northerner saying "a nun" but it actually translates to "straight away" or "right now". *"I come, anon."*
Art – a synonym of the verb 'to be'. We've famously heard it *in "Romeo! Romeo! Where art thou Romeo?"* or in *"For where thou art, there is the world itself"*. Which takes us to…
Thou– an archaic way to say "you" pronounced thaü. Shakespeare uses this all throughout his plays and sonnets and as it was a term used in Old English, it can also be seen in ecclesiastical language: "Thou shalt not kill". Today, the word "you" is common for gender and number, but in Old English there were many different words which were used instead of the personal pronoun.
For example, **Thee** was the singular objective case "he does not care for thee". And…
Thy is the equivalent of "your". "*Thy* husband is *thy* lord, *thy* life, *thy* keeper…"
Hither – an elegant alternative to "here": "Come hither, young lad"
Ho – Shakespeare used it as an equivalent to "Hey": ""O, ho, are you there with me?"

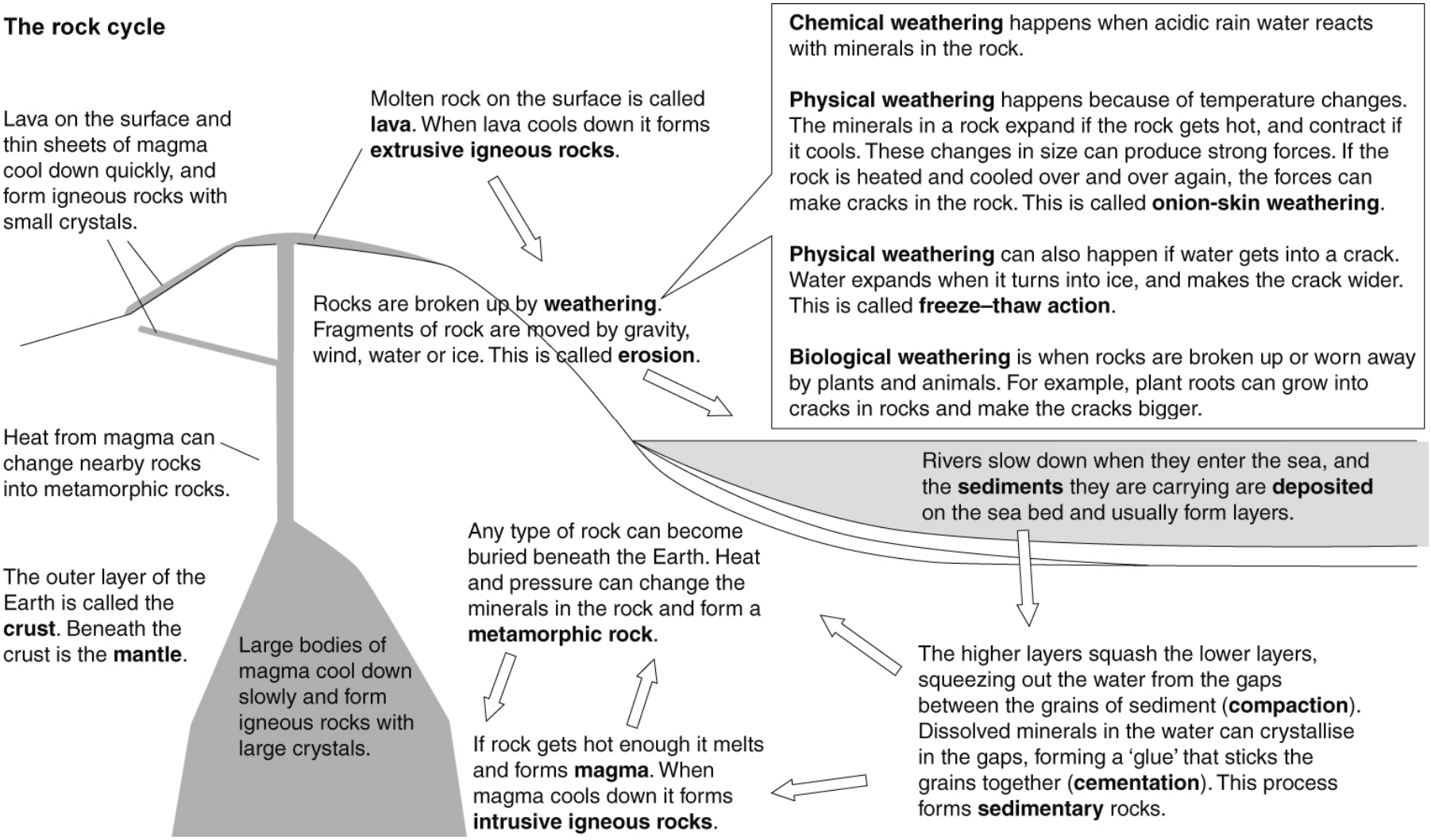
Key terms	Definition
Tragic hero	A seemingly noble character whose actions lead to their downfall.
Soliloquy	A speech given by a character whilst alone to express their thoughts to the audience (not the other characters).
Hubris	Excessive pride which leads to a downfall.
Tragedy	A genre of play that focuses on the downfall of the main character.
Hamartia	A fatal flaw that leads to tragic hero's downfall.
Motif	A recurring idea/ image throughout a text.

Language/ structural techniques	Definition
Pathetic fallacy	A type of personification where emotions are given to a setting, an object or the weather.
Symbolism	When an object represents an idea that is much deeper and more significant.
Personification	Describing an inanimate object as having human feelings.
Metaphor	A descriptive technique that names a person, thing or action as something else.
Simile	A descriptive technique that compares one thing with another, usually using 'as' or 'like'.
Foreshadowing	When the writer hints what is going to happen later on in the text.
Superlative	An adjective/ adverb that indicates the most of something.
Intensifier	A word, especially an adverb or adjective, that is used to add emphasis to another adjective, verb, or adverb i.e. *so, very, really.*
Minimiser	A word or phrase that is used to make another adjective, verb or adverb sound lesser i.e. *a bit, some.*
Imperative	A sentence that is a command.
Exclamatory	A sentence that expresses a heightened emotion. They end with an exclamation mark.
Listing	When the writer includes several words/ phrases/ ideas, one after the other.
Repetition	When a word/ phrase is noticeably repeated throughout a sentence/ paragraph/ whole text.
Imagery	A technique in which the author appeals to the senses i.e. seeing, hearing, touching.
Foil	A character that exaggerates the opposing qualities of another character.

Science

Rocks

The rock cycle



Chemical weathering happens when acidic rain water reacts with minerals in the rock.

Physical weathering happens because of temperature changes. The minerals in a rock expand if the rock gets hot, and contract if it cools. These changes in size can produce strong forces. If the rock is heated and cooled over and over again, the forces can make cracks in the rock. This is called **onion-skin weathering**.

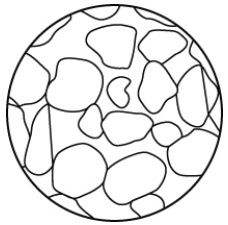
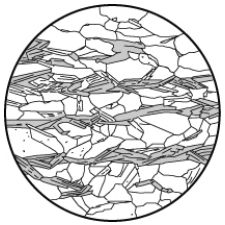
Physical weathering can also happen if water gets into a crack. Water expands when it turns into ice, and makes the crack wider. This is called **freeze–thaw action**.

Biological weathering is when rocks are broken up or worn away by plants and animals. For example, plant roots can grow into cracks in rocks and make the cracks bigger.

Science: 8H

Rock textures

Rocks are made of **grains**. Each grain is made of a naturally occurring compound called a **mineral**. The **texture** of a rock is a description of the size and shape of the grains.

Type of rock	Sedimentary	Igneous	Metamorphic
Examples	limestone, sandstone, mudstone, chalk	basalt, gabbro, granite	marble, quartzite, slate, schist, gneiss
Grains or crystals?	separate grains	interlocking crystals that are not lined up	interlocking crystals, often lined up in bands of different colours
Hard or soft?	often soft or crumbly	hard	hard
Porous?	often	not usually	not usually
Example of texture			

Fossils

Fossils can form when dead plants or animals fall to the bottom of the sea. If their remains get covered by other sediments they do not rot. As the sediments turn into sedimentary rock, the shape of the organism is preserved in the rock. When a dead organism forms a fossil, its form can still be seen because its hard parts have been turned into stone.

Materials from the Earth

Many of the materials we use are obtained from the Earth. We use stone for building. **Cement** is made from **limestone**, and **concrete** is made by mixing cement, sand and **gravel** with water.

We also obtain metals from the Earth. Unreactive metals like gold and silver are found in their **native states**. Other metals are found as parts of minerals. An **ore** is a rock with enough of a particular mineral in it to make it worth mining. Pure metals are obtained from minerals using chemical reactions.

Mining for metals can destroy habitats and cause pollution.

If we **recycle** metals we will:

- make supplies of metals last longer
- reduce amounts of mining (and so reduce the pollution and environmental damage this causes)
- reduce pollution caused by putting metals in landfill sites.

Moving things

Speed

To measure how fast something is travelling, you need to measure the distance it travels and the time taken. Units for **speed** are **km/h** or **m/s** or **mph**. The unit for speed depends on the units you have used to measure the distance and the time.

Speed is calculated using this formula:

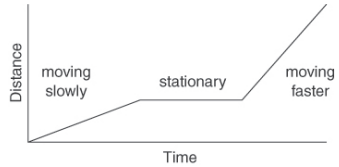
$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

The **mean (average) speed** is the total distance travelled divided by the total time taken. Actual speeds during a journey can be faster or slower than the mean speed.

A car travelling at 50 km/h overtakes one travelling at 30 km/h. The **relative speed** of the faster car compared to the slower car is 20 km/h.

Distance–time graphs

A journey can be shown on a **distance–time graph**. This graph shows Kieron's journey to school. The steeper the line on the graph, the faster the object or person is moving.

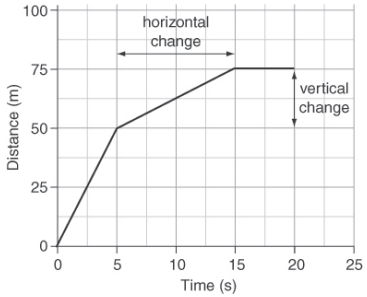


Gradients

The **gradient** of a line on a graph is a measure of how steep the line is. On a distance-time graph, the gradient of a line gives the speed that the object is moving.

Example

Calculate the speed of the object between 5 and 15 seconds.



$$\text{gradient} = \frac{\text{vertical change (distance moved)}}{\text{horizontal change (time taken)}}$$

$$= \frac{(75\,\text{m} - 50\,\text{m})}{(15\,\text{s} - 5\,\text{s})}$$

$$= \frac{25\,\text{m}}{10\,\text{s}}$$

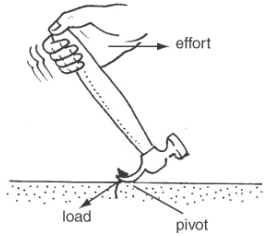
$$= 2.5\ \text{m/s}$$

Levers and moments

Forces can be used to turn objects around **pivots**. A pivot is also known as a **fulcrum**.

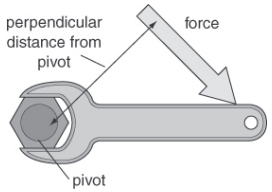
Levers can be **force multipliers**, when they increase the force that is put in (the **effort**). They can be **distance multipliers** if they make the **load** move further than the effort. The amount the force or distance is multiplied depends on the distances between the load and the pivot, and the effort and the pivot.

A turning force is called a **moment**. Moments are measured in **newton metres** (**N m**).



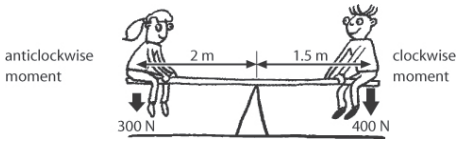
The hammer is acting as a force multiplier.

moment (in N m) = force (in N) × perpendicular distance from the pivot (m).



The longer the distance the greater the moment. This is why it is easier to turn a long spanner than a short one.

When an object is balanced, the anticlockwise moment is equal to the clockwise moment.



For the seesaw:

the anticlockwise moment = 300 N × 2 m
= 600 N m

the clockwise moment = 400 N × 1.5 m
= 600 N m

The clockwise and anticlockwise moments are the same, so the seesaw is balanced, or **in equilibrium**.

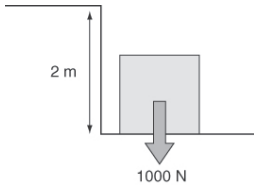
Simple machines

A lever is an example of a simple **machine**. **Ramps** and **pulleys** are simple machines that act as force multipliers.

If a machine makes it possible to lift or move a load using a smaller force, the force has to move through a greater distance. The total amount of energy needed is the same.

The **work done** by moving a load is the same as the energy transferred. Work is done when a force moves through a distance. Work is measured in joules (J).

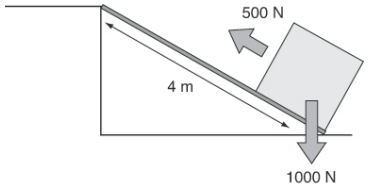
work = force × distance moved in the direction of the force.



The work done to lift the box 2 m is:

work = 1000 N × 2 m

= 2000 J



The ramp makes it possible to move the box using a force of only 500 N, but the box has to be moved 4 m.

work = 500 N × 4 m

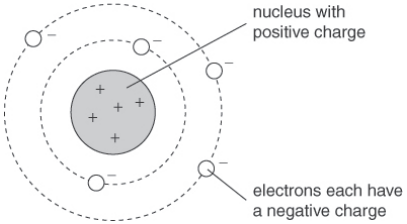
= 2000 J.

The box stores the same amount of gravitational potential energy when it is in its final position whichever method is used to lift it. The **law of conservation of energy** means that only this amount of energy is used to lift it.

Force fields and electromagnets

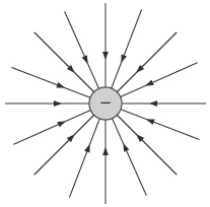
Static electricity

An **atom** consists of a central **nucleus** with small particles called **electrons** moving around it. An atom normally has no overall **charge** because it has the same number of positive and negative charges.



When you rub two materials together, electrons may be transferred from one material to the other. If the objects are insulating materials, the object that gains electrons has a negative charge of **static electricity**. The object that loses electrons has a positive charge.

A positively charged object will attract a negatively charged object. Two objects with the same charge (both positive or both negative) will repel each other.



The space around a charged object where it will attract or repel other charged objects is its **electric field**. The arrows on the diagram show the direction a positive charge would move.

Resistance

The **resistance** of a component is a way of saying how easy or difficult it is for an electric current to flow through it. The size of a current depends on the resistance of the circuit and on the voltage that is 'pushing' the current:

- the higher the voltage, the higher the current (if the resistance stays the same)
- the higher the resistance, the lower the current (if the voltage stays the same).

All metals conduct electricity, but some metals are better conductors than others. The resistance of a wire depends on:

- the material from which it is made
- its length (longer wires have higher resistances)
- its thickness (thicker wires have lower resistances).

Calculating resistance

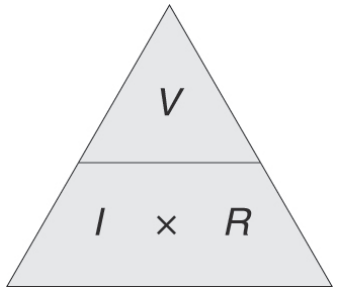
The units for measuring resistance are **ohms**, and the symbol is the Greek letter omega (**Ω**).

Voltage, resistance and current are related by this formula:

voltage = current × resistance

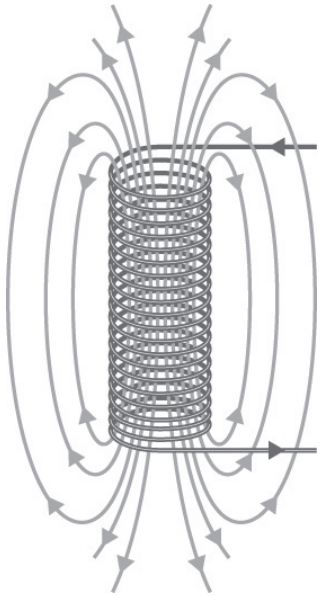
To calculate a resistance, you need to measure the current in amps and the voltage in volts.

$$\text{resistance} = \frac{\text{voltage}}{\text{current}}$$



Electromagnets

A bar magnet is a **permanent magnet**, because it is always magnetic. A wire with electricity flowing through it has a **magnetic field** around it. An **electromagnet** is a coil of wire with an electric current flowing through it. It is only magnetic while the current is flowing. The shape of the magnetic field of an electromagnet is similar to the magnetic field of a bar magnet.

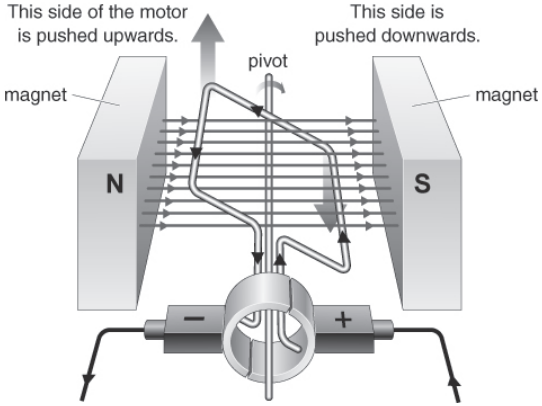


You can make an electromagnet stronger by:

- increasing the number of coils of wire
- increasing the size of the current (by increasing the voltage)
- using an iron core.

Motors

If a wire carrying a current crosses a magnetic field, the wire will experience a force. This is the **motor effect**.



An electric motor consists of a coil of wire in a magnetic field. When there is a current in the coil, there is a force on each side of the coil that makes it turn.

The speed of the motor (or the force it provides) can be increased by:

- increasing the size of the current
- increasing the strength of the magnetic field
- increasing the number of turns of wire on the coil.

History

History - Origins of WWI

MAIN

These are the long term causes of WWI

arism – all countries particularly Germany were building up armed forces

nces – an alliance is an agreement between countries to one another. Europe had two main Alliance systems: Triple ice: Germany, Italy and Austria-Hungary and the Triple nte: GB, France and Russia

erialism – this is when a country tries to build up an empire. ia-Hungaru wanted to expand its empire (e.g. taking ia)

onalism – this is a strong love of one's country. Some tries such as Bosnia and Serbia wanted to resist being part other countries empire

sination of Franz Ferdinand

Ferdinand was the heir to the Austro-Hungarian throne. He was by Serbian terrorists on 28th June 1914 in the city of Sarajevo. The in who shot him was called Gavrilo Princip, who was only 17 years of He was later arrested. However, Franz-Ferdinand's death triggered off iance system and started WWI

Schlieffen Plan

This was Germany's master plan at the start of WWI to avoid a war on two-fronts. Th plan was always to attack France first by invading the neutral country of Belgium and then to swing round Paris in a hammer blow motion. Once the French were defeated the German army would move eastwards to deal with the Russians, who the Germans believed would take a long time to mobilise for war. The plan failed though, as Russia invaded Germany after only 10 days!!!

What was Life like in the Trenches?

Trench life was awful. Soldiers faced trench foot, lice, bad food, mud and the constan fear of death. On top of this there were huge rats, which ate the bodies of dead comrades. However, trench life could also be boring, as soldiers were never constantl fighting. Some soldiers even completed correspondence courses and learnt new languages!!!

History - Origins of WWI

Recruitment

At the beginning of the war Britain's army was small approximately 250,000 men in total. Britain's army was sent to France and Belgium in August 1914, they were known as the British Expeditionary Force. However, because of mounting casualties more soldiers were needed. Therefore, a huge recruitment campaign was launched to ask young men to join up and fight. This was hugely successful, especially Lord Kitchener's poster campaign, 'Your country needs you!' and the introduction of the 'Pals Battalions'. After the Battle of Somme the number of volunteers wanting to join the army began to fall. At this point the government introduced CONSCRIPTION. This was when men between the ages of 18-40 had to serve in the army by law.

Weapons of WWI

WWI rapidly turned into a stalemate, meaning neither side had a real advantage. This was because trenches were difficult to break through. This led to both sides to develop new weapons in the hope of making a break though. New weapons which were created were: tanks, flame throwers, poisonous gas and aircraft. There were also machine guns and large cannons which fired artillery shells. These two weapons were responsible for the most number of deaths and injuries.

Research

Research what happened during the first Battle of the Marne

Who was Flora Sandes?

What was a Night Raid and what did soldiers take with them?


Geography

Geography - Polution

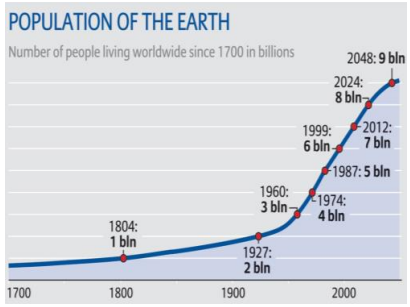
Key Terms

Natural increase
Birth rate
Death rate
Distribution
Density
Densely
Sparsely
Life expectancy
Youthful
Ageing
Exponential
Migration
Trends

Population Growth

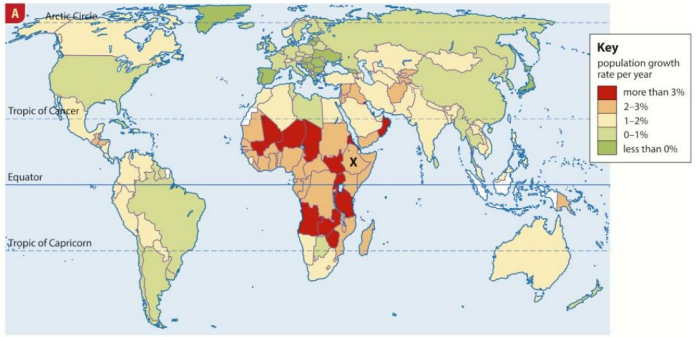
The world's population does not stay the same. In fact, over the last few hundred years it has been growing faster and faster.

In the entire world, there has been an explosion in population. During the 1st century AD, the world population was about **300,000 people**. The current population is over **7 billion**, and most of the **growth** has taken place within the last **100 years**. In fact, in the late **1990**s, the world population was **5.9 billion**, which increased to over **7 billion in 2011**.



What causes population to change?

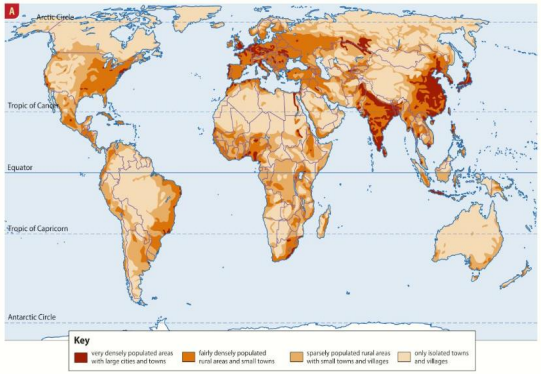
- births (e.g. availability of **contraception** and trends)
- deaths (e.g. war and disease)
- migration (e.g. people moving into or out of a country)



The population is growing at around **1.2% each year**. This is roughly an extra **80 million** people each year. The rate of growth is not the same everywhere, the map to the left shows that the population is rising fastest within central **Africa**. Generally population growth is faster is poorer, less developed countries and lower in wealthier countries.

Why are growth rates so high in some places?

- People think of children as a form of security. They can earn money or help on the farm, but some wont survive, so a big family is welcomed.
- Many women have no access to advice about spacing out their children. They may have babies one after another.
- Many girls have little choice. They leave primary school after a year or two. They may be married young and husbands might control how many children they have.



World population distribution describes how people are spread out across the globe. The human population is not spread evenly. Few people live in locations that are **sparsely** populated and **densely** populated places have many.

Factors affecting how densely/sparely populated an area is:
Sparse Populations: steep sloes, harsh climate, dense forest, isolated area, poor transport links, few jobs, lack of resources.
Dense Populations: flat or gently sloping land, mild climate, good soils, water, good transport links, places to work, resources e.g. coal, oil.

UK population distribution

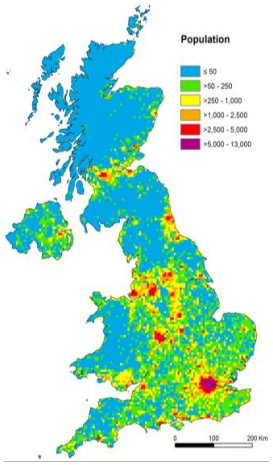
Population distribution in the UK is also uneven. Some parts of the UK are very crowded. The **south east**, which includes the city of **London**, has a much greater population than the **highlands of Scotland**.

Reasons for the population distribution in the UK

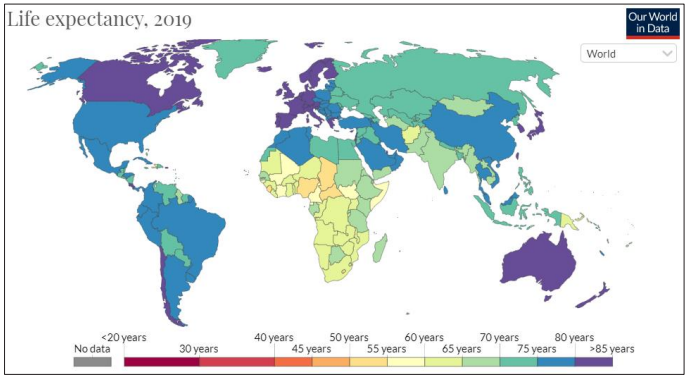
The **south east of England** benefits from: good transport links, easy access to the rest of Europe, being the seat of Government.

North West England has a high population density because many people located there because of raw materials (coal) and industry.

Scotland has a low population density because: some areas are remote, it is mountainous, making areas less accessible



Geography - Polution



Life Expectancy is how many years a person can expect to live. Average life expectancy in the **UK is 82 years**, where as for Nigeria it is 54 years.

Life expectancy varies due to factors such as: famine, war, disease, access to clean water, education, food and medical help.

Overpopulation is when there are too many people for the available resources.
Impacts of overpopulation include:

Social Impacts	Economic Impacts	Environmental Impacts
There are food shortages if the country cannot grow or import enough food.	Wages are low due to high competition for jobs	There is an increase in the amount of pollution as more people equal more greenhouse gas emissions.
Services such as healthcare and education cannot cope with the large young population so not everyone has access to them.	There becomes not enough jobs for the number of people, so unemployment is high.	There is an increase in the amount of waste and landfill sites.
Diseases spread more quickly especially is low quality housing areas.	With fewer resources, there will be an increase in living costs	The more land we take over, the less land there is for other living species e.g. pandas

China's population was growing rapidly during the 1950s -1970s with so many people, there were not enough resources to go around, therefore **the China One Child Policy** was introduced in 1978, this was relaxed in 2015 to allow a family to have two children.

Impacts of the One Child Policy		
The fertility rate has dropped from 5.7 in 1960 to 1.5 in 2011.	About 400 million births may have been prevented.	In urban areas the policy was very effective.
It has led to an ageing population with a high **dependency ratio**. The ageing population is also increasing because of the improvements in living standards and life expectancy in the country.	The cultural preference for boys has meant that there seems to be a gender imbalance in China	There were reports of female **infanticide**, especially when the policy was first introduced.

An **ageing** population is when there are **more people over 65 than under 15**. This results in the working population having many elderly people to support, however as the percentage of young people is low, when they grow up, there won't be enough of them to do all the work. Therefore immigrants from other countries might have to move to countries such as Germany to fill job shortages.

A **youthful** population is when there is a **high percentage of people under 15 than over 65**. With so many young people, many may find it hard to get work when they grow up. Countries with an youthful population have to invest in education facilities and health care services to provide for their population.


Religious
Studies

Hartford Church of England High School

Religious Studies

HINDUISM KNOWLEDGE ORGANISER

Overview

Hinduism is one of the world's major religions. It is the **world's 3rd largest religion**, with about 1.1 billion followers. It is around 5,000 years old.

Hindus are the people who follow Hinduism. It is a very complex religion that is followed by different people in different ways.

Many gods are worshipped in Hinduism. All of these different Gods are believed to be a part of the supreme God named **'Brahman.'**

Hindus believe in **karma** and **reincarnation** – that when you die you are reborn as something else.

Hinduism does not have one holy book, but several sacred texts. **Mandirs** are Hindu worship buildings.

Image of Holi festival, celebrating the start of spring. People smear each other with colours.

Hindu Beliefs

Brahman and the Gods

-Hindus believe in one supreme God called Brahman. He can be found in everyone and everything, including the other Gods.

-Some of the important other Gods include 'Brahma' (the creator), 'Shiva', (the destroyer) and 'Vishnu' (the protector). These three together form the 'Trimurti' (trinity).
-Other gods include Ganesh (remover of obstacles), Hanuman (the monkey God), Lakshmi (the Goddess of wealth and good fortune, and Vishnu (the God who preserves life and stands up to evil).

Karma and Reincarnation

-Hindus believe that people are born again after they die, as another living thing (reincarnation).

-In each life the person is rewarded or punished for the things that they have said and done in their last life – this is called karma.

-Hindus believe that if they live a perfect life, they will be freed from birth and death to join the Gods (Moksha).

Festivals

- Hindus enjoy many festivals as a part of their religion. Holi festival marks the beginning of spring.

-Diwali, or the Festival of Lights, is held in the Hindu month of Ashwin (September of October in the western calendar). This event marks the Hindu New Year. Oil lamps are lit and floated down rivers to welcome the Goddess of Wealth. Fireworks are set off in order to ward off evil spirits.

-Hindu people also go on pilgrimages, for example to the River Ganges, which is sacred to Hindus.

Answers to Important Questions and Key Vocabulary

Where and how do Hindus worship? Why?	 	-Many Hindus worship at home in their own shrine – this could be anything from a room, an altar, or simply pictures or statues. -The Hindu building for communal worship is called a Mandir (Hindu temple). The temples are dedicated to different gods and are the focus of religious life. -At Mandirs, Hindu people often recite the names of Gods and Goddesses. They also offer water, fruit and flowers to the Gods.
What are the Hindu holy books?		-There are many different types of holy texts in Hinduism. Perhaps the most sacred are called the Vedas. The Vedas guide people in their daily lives. They are written into the Sanskrit language.
Where do most Hindus live in the world?		-About 15% of the world's population are Hindus. -India has the most Hindus by far – about 1 billion Indians are Hindus – this is around 80% of all Indians. -However, Nepal has the highest proportion of Hindus – about 83% of its population are Hindus. There are also lots of Hindus in Bangladesh, Indonesia, Malaysia, Pakistan and Sri Lanka. -Most of the populous countries in the world contain a population of Hindu people.
How many different types of Hindus are there?		-There are many, many different forms of Hinduism, as different types have developed over the thousands of years since it was founded. -There are four main forms – Vaishnavism, Shaivism, Shaktism and Smartism. These four types can be broken down many more times! -Although they have small differences, each of the different forms follows the same rough principles.

Key Vocabulary

Hindu
Brahman
Karma
Reincarnation
Brahma
Shiva
Vishnu
Holi
Dewali
Dhoti
Sari
River Ganges

Top 10 Facts!

1. Hindus believe that all living things have souls.
2. Because of this, very committed Hindus are vegetarians.
3. Cows are considered to be particularly sacred, as they give milk to the people.
4. People clean their houses, and then decorate them, to celebrate Diwali.
5. Traditional Hindi clothes include a robe (dhoti) and shawl (chaddar) for men.
6. Hindu women wear a long piece of clothing called a sari.
7. Singing and dancing is an important part of Hindu worship, as is chanting.
8. Big Hindu ceremonies include marriage (vivaha) and cremation (antyeshti)
9. Hindu wedding celebrations last for many days. The bride and groom wear red and gold.
10. After death, Hindus are cremated, and their remains are scattered in a nearby river.

Hindu Timeline

- 2500BC: Evidence of Indus Valley Hindus.
- 1500 BC: The oldest Hindu scriptures were created.
- 1300 BC: The oldest Hindu hymns were composed.
- 800 BC: The sacred text of the Mahabharata begins to be composed.
- 100 BC: The Ramayana is written.
- 600AD: Hinduism begins to grow and flourish – prayers and songs written.
- 950-1050AD: A 'City of Temples' is built in India at Khajuraho – 80 still stand.
- c. 1600 AD: The Hindu Renaissance begins. Many modern versions of sacred texts are found, translated and used.


Spanish

Hartford Church of England High School

Spanish

Entretenimiento Y8 HT5

¿Qué haces en tu tiempo libre? - What do you do in your free time?	
1. Veo la television	1. I watch TV
2. Escucho música en Spotify	2. I listen to music on Spotify
3. Uso Facebook	3. I use Facebook
4. Uso Instagram	4. I use Instagram
5. Juego los videojuegos en el ordenador	5. I play videogames on the computer
6. Navego por Internet	6. I surf the Internet
7. Compro en línea	7. I shop online
8. Chateo con mis amigos	8. I chat with my friends
9. Descargo música	9. I download music
10. Leo E-books	10. I read e-books
11. Mando mensajes en mi móvil	11. I send messages on my phone

¿Por qué? - Why?	
1. monótono	1. boring
2.entretenido	2.entertaining
3. emocionante	3. exciting
4. rápido	4. quick
5. útil	5. useful
6.fácil de usar	6.easy to use
7.gratis	7.free
8.adictivo	8.addictive
9.difícil	9.difficult
10. social	10. social
11. caro	11. expensive

¿Cómo sueles usar tu móvil?– How do you usually use your phone?	
1. Suelo + infinitive	**1. I usually…**
2. Escuchar música	2. To listen to music
3. Descargar melodías	3. To download ringtones
4. Chatear en Whatsapp	4. To chat on Whatsapp
5. Usar aplicaciones	5. To use apps
6. Escribir correos electrónicos	6. To write e-mails
7. Leer e-books	7. To read e-books
8. Mandar mensajes	8. To send messages
9. Sacar fotos	9. To take photos
10. Ver películas	10. To watch films
11. Hablar por Skype	11. To talk on Skype
12. Jugar los videojuegos	12. To play videogames
13. Comprar en línea	13. To shop online
14. Navegar por Internet	14. To surf the Internet
15. Ver los vídeos en Youtube	15. To watch videos on Youtube

¿Qué vas a hacer en tu Smartphone? – What are you going to do on your Smartphone?	
1. si tengo un nuevo móvil	1. If I have a new phone
2. Si tengo wifi	2. If I have Wifi
3. cuando tenga tiempo para relajarme	3. When I have time to relax
4. cuando el cole termine..	4. When school finishes
5. Voy a…	5. I am going to
6. Vamos a…	6. We are going to
7. Me gustaría..	7. I would like to
8. Quiero...	8. I want to
9. quiero compartir...	9. I want to share
10. voy a perderme en Youtube	10. I am going to lose myself on Youtube
11. Una aplicación	11. An app
12. Un cargador	12. A charger
13. Un aparato	13. A device
14. Una pantalla	14. A screen
15. La red	15. The Internet

¿Qué prefieres ver? – What do you prefer to watch?	
1. Las películas	1. Films
2. Las noticias / el telediario	2. The news
3. Los programas de deporte	3. Sports programmes
4. Los programa de música	4. Music Programmes
5. Los realitys	5. Reality shows
6. Los concursos	6. Game shows
7. Los videoclips	7. Video clips
8. Los documentales	8. Documentaries
9. Las comedias	9. Comedies
10. Las series de policia	10. Police Series
11. Los dibujos animados	11. Cartoons
12. Las telenovelas	12. Soap Operas
13. El tiempo	13. The weather

¿Cómo te preparas? – How do you get ready?	
1. Cuando salgo…	**1. When I go out…**
2. Me ducho	2. I shower
3. Me baño	3. I bath
4. Me lavo los dientes	4. I clean my teeth
5. Me lavo la cara	5. I wash my face
6. Me visto	6. I get dressed
7. Me peino	7. I brush my hair
8. Me maquillo	8. I straighten my hair
9. Me pongo gomina	9. I gel my hair
10. Me aliso el pelo	10. I straighten my hair

¿Qué sueles llevar? – What do you usually wear?	
1. Suelo llevar	**1. I usually wear**
2. un jersey	2. A jumper
3. un vestido	3. A dress
4. una camiseta	4. A t-shirt
5. una sudadera	5. A hoodie
6. una falda	6. A skirt
7. una chaqueta	7. A jacket
8. una gorra	8. A cap
9. una camisa	9. A shirt
10. unos pantalones	10. Some trousers
11. unos vaqueros	11. Some jeans
12. unos zapatos	12. Some shoes
13. unas botas	13. Some boots
14. unas zapatillas de deporte	14. Some trainers


IT

IT - Animation

What is animation?

When we show a series of images, each slightly different from the previous one, the brain is fooled into thinking the image is moving

What can animate do?

- Animate, or Flash as it was formerly known, is used to create animations
- These can be anything from simple web banners to cartoons – The Mr Men TV series is drawn completely in Animate, for example.

Frame
Each image in the series of images that creates the animation.

Key frame
Each key frame defines a change on the stage and when the movie is played.

Timeline
Where you can add, remove and reorder the frames.

Onion Skinning
Allows you to view the image on multiple frames at once.

Frame rate
How quickly the animation plays through the frames, FPS means frames per second.

Tweening
Stands for inbetweening and is when the computer adds in extra frames between your key frames to make the animation smooth.

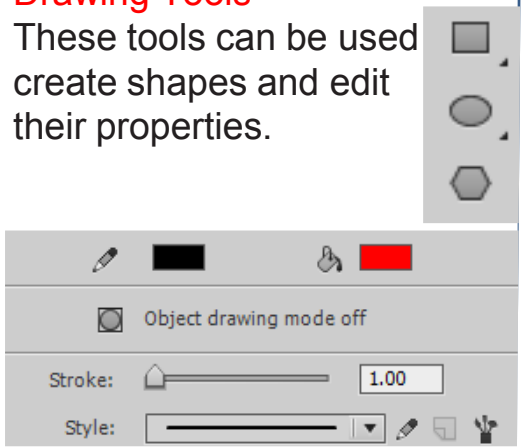
Actionscript
A programming language used to make an animation interactive.

Vector Graphics

- When you draw in Animate, you create vector art.
- You can combine and subtract shapes from one and other.

Drawing Tools

These tools can be used create shapes and edit their properties.



Motion Tweening

- Moving a graphic from one position to another
- Must use graphics converted to symbols
- Adding a motion tween lets you design a path for the symbol to travel on

Shape Tweening

- You can “morph” from one shape to another
- Shape tweening can be used to gradually alter the form of any editable shape
- You can change the shape, colour and position of the shape

Art

Hartford Church of England High School

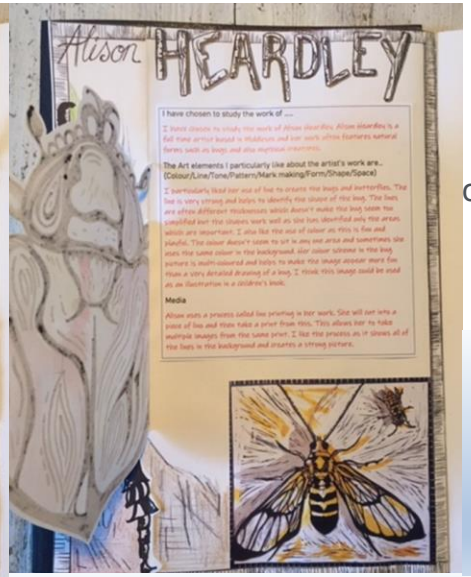
ART

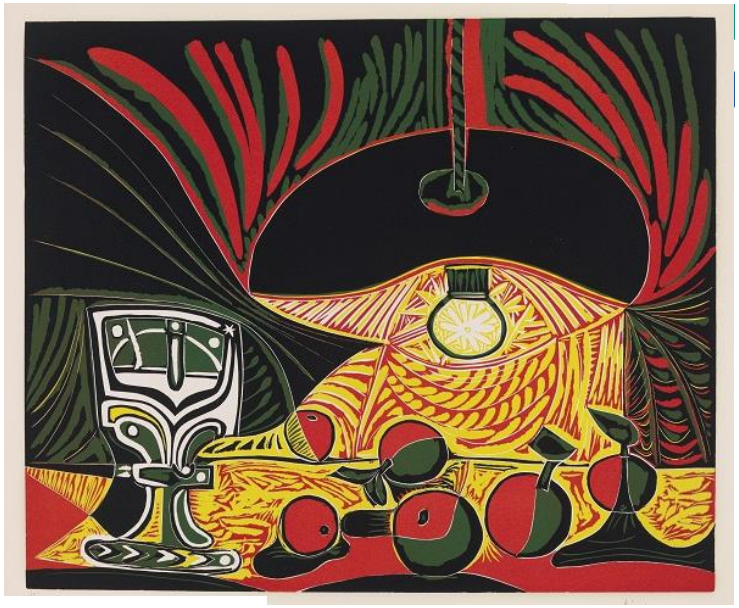
Nature/Printing

During this term you will be learning how to make a reduction print. Printing is a process which allows artists to produce many copies of the same image. You will be focusing on the topic Bugs and will be introduced to lots of artists who have used bugs as their inspiration.

Deliberate Practice

- Develop your understanding of bugs through **DRAWING**. Produce 3 drawing s of different bugs.
- A tonal drawing - pencil
- A drawing using pattern - pen
- A drawing using colour – pencil crayon
- Use your artist research page in your KO to present a page on the artist Alison Heardley.





Picasso

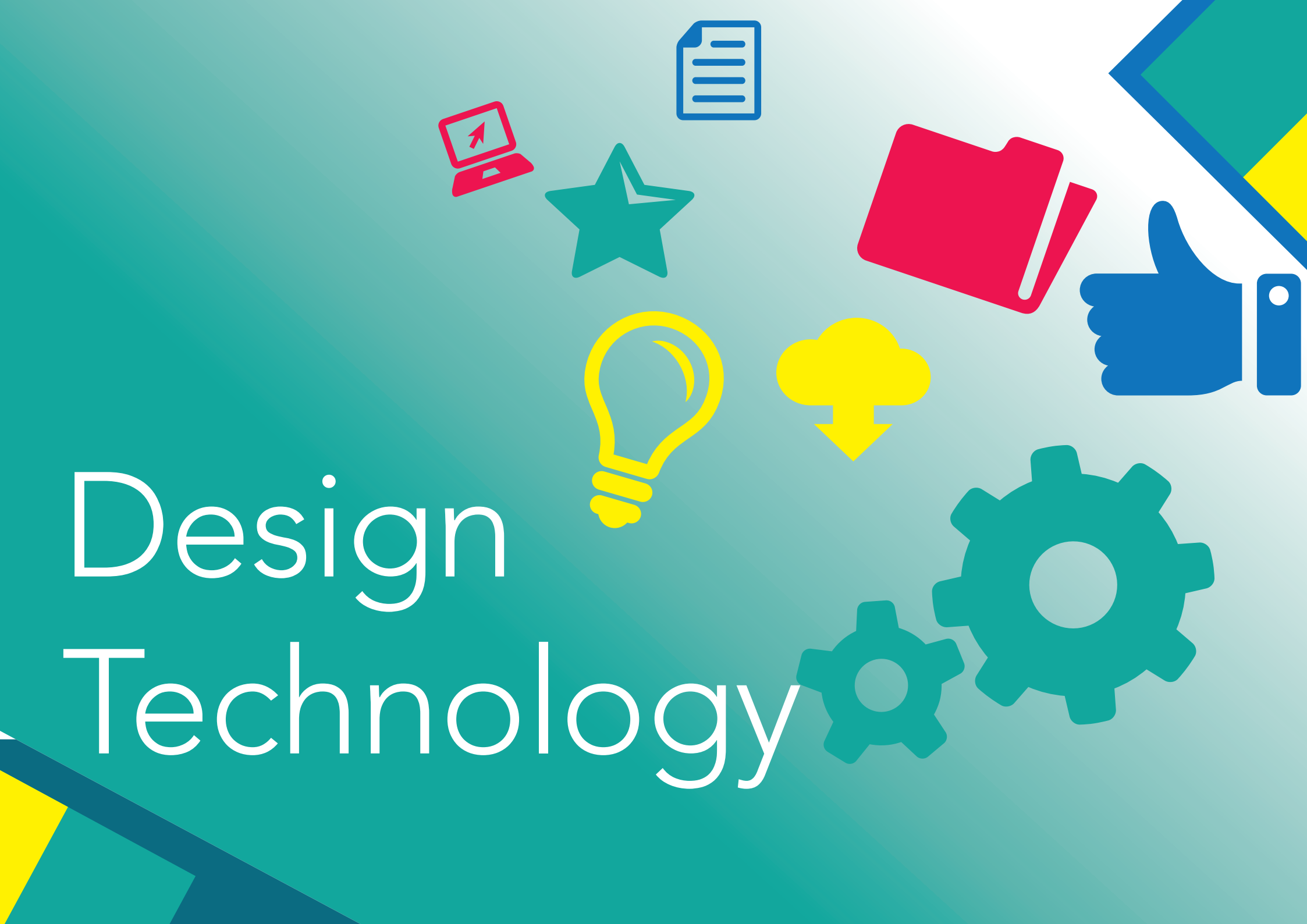
A **reduction print** is made when an artist creates a multi-colored, layered **print** using a single **print** block. The block cou be foam, linoleum or even wood. The artist repeats the proces of carving and **printing** over and over until the final look is achieved. Above is an example of a print by Picasso.

Deliberate Practice

- Produce a guide to printing, include examples of printing techniques, images of artists work and present it creatively in a booklet format or on and A4 page.

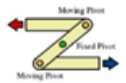
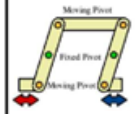
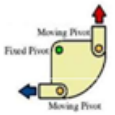
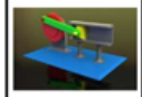
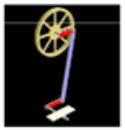
Keywords

Carving Burnish Process Engraving Intaglio Reduction Proof Register Relief Print Overlay Plate


Design
Technology

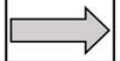
Design & Technology - Control

3: Mechanical Devices – Linkages

Reverse motion linkage	The reverse motion linkage changes the direction of the input motion so that the output travels in the opposite direction. If the input is pulled the output pushes and vice versa. It uses a central bar held in position with a fixed pivot (fulcrum) that forces the change in direction and two moving pivots which are connected to the input and output bars.	
Parallel motion or push/ pull linkage	The push/pull linkage maintains the direction of the input motion so that the output travels in the same direction. If the input is pulled the output is pulled and so on. It uses three linking bars, four moving pivots and two fixed pivots.	
Bell crank linkage	The bell crank linkage changes the direction of the input motion through 90 degrees. It can be used to change horizontal motion into vertical motion or vice versa. It uses a fixed pivot and two moving pivots.	
Crank and slider	The crank and slider linkage changes rotary motion into reciprocating motion or vice versa. It uses a crank which is held with a fixed pivot. A connecting rod uses two moving pivots to push and pull a slider along a set path.	
Treadle linkage	The treadle linkage changes rotary motion into oscillating motion or vice versa. It uses a crank which is held with a fixed pivot. A connecting rod uses two moving pivots and a further fixed pivot to create a windscreen wiper motion.	

1: Mechanical Devices - Motion

There are four types of motion:

Linear Motion is movement in one direction along a straight line.		
Oscillating Motion This motion is similar to reciprocating motion, but the constant movement is from side to side along a curved path.		
Rotary Motion Examples of circular motion include a ball tied to a rope and being swung round in a circle		
Reciprocating Motion, this is repetitive up-and-down or back-and-forth linear motion		

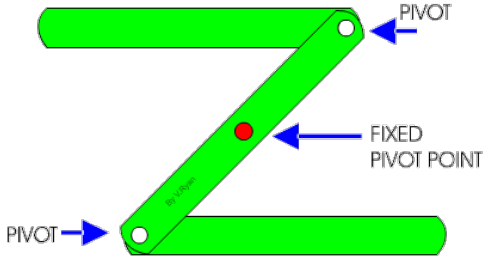
2: Mechanical Devices – Levers

There are three classes of levers.

Class One A class one lever has its input on one side of the fulcrum and its output on the other.		
Class Two A class two lever has its input at one end of the lever, its output in the middle and fulcrum at the other end.		
Class Three A class three lever has its output at one end of the lever, its fulcrum at the other with its input in the middle.		

Fixed pivot:
A **pivot** that attaches a link to the base; also called a fulcrum. It is represented in drawings by a solid circle.

Floating pivot:
A **pivot** that attaches one link to another, but neither to the base, such as
a **pivot** connecting an input link to a lever. It is represented in drawings by an open circle.

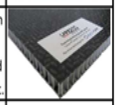


3. Boards

Type	Description and uses
Corrugated card	• strong and lightweight • used for packaging protection and point of sale stands • available in different thicknesses
Duplex board	• large foam-based board • different finishes available including metallic and hologrammatic • used for food packaging, e.g. take-away pizza boxes
Foil lined board	• quality cardboard with a aluminium foil lining • ideal for ready made meals or take away meal cartons • The foil retains the heat and helps keep the food warm
Foam core board	• very light, very stiff and very flat. • It has a white, rigid polystyrene foam centre, with smooth white paper laminated onto both faces. • It is easy to cut with a knife, a mount cutter or on a wall cutter • great for modelling
Ink jet card	• Has been treated so that it will give a high quality finish with inkjet ink • available in matt and gloss
Solid white board	• top quality cardboard made from quality bleached wood pulp. • used for hard backed books and more expensive items • excellent print finish

Design & Technology - Resistant Materials

1: Forces and Stresses

Force	Description	A fair test for each force/stress.	How a material / object can be adapted to resist	Examples
Tension	Forces pulling in opposite directions.	Apply the same weight to each material and suspended in the same manner.	Concrete can have steel bars inserted to reinforce.	
Compression	Forces that are trying to crush or shorten.	Insert materials into a vice/clamp and apply the same amount of twists to the handle.	Composite panels can have a honeycomb structure sandwiched in the middle to resist.	
Bending	Flexing force	Apply the same weight to the material.	Steel beams have an I profile to resist bending.	
Torsion	Twisting force.	Use clamps & stands to hold the materials and turn in opposite directions at the same angle.	The diagonals on a tower crane help the structure against torsion.	
Shear	A strain produced when an object is subjected to opposing forces.	Place the material between a tool that works in opposite directions. e.g. Shears	Bolts are hardened and have unthreaded shanks to help stop shearing.	

Material WORKING properties

Strength
The ability to withstand force without breaking

Elasticity
The ability to stretch and return to their original shape

Ductility
The ability to be drawn or stretched out onto a thin strand without snapping

Malleability
The ability to be deformed and to remain in that shape

Hardness
The ability to withstand scratching or denting

Toughness
The ability to withstand breaking or snapping

3. Metals

Aluminium	A grey light weight metal. Can be polished Rust resistant	
Mild Steel	Dark grey heavy metal. Rusts very quickly if exposed	
Stainless Steel	A very shiny heavy metal Very resistant to rust & wear	
Cast Iron	Strong in compression Very Brittle	
Copper	A reddish soft metal. Excellent conductor of heat and electricity	
Brass	Yellow colour Hard. An ALLOY of copper & zinc	

What is ANTHROPOMETRICS ?

The study of the human body and its movements.

The study of the human body and its movement, often involving research into measurements relating to people. It also involves collecting statistics or measurements relevant to the human body, called Anthropometric Data. The data is usually displayed as a table of results, diagram or graph. Anthropometric data is used by designers and architects.

What is ERGONOMICS ?

The study of people and their relationship with the environment around them.

Measurements, also known as 'anthropometric data', are collected and applied to designs / products, to make them more comfortable to use. The application of measurements to products, in order to improve their human use, is called Ergonomics.

Ferrous Metals:

FERROUS METALS are those which are iron based. They contain Iron and carbon in varying amounts. As iron is extracted from its ore in a furnace it contains a relatively high amount of carbon. This makes the iron hard but brittle this is known as cast iron. It resists compression but may break if dropped, hit or stretched. It is used to make car brake drums, railings and manhole covers. Cast iron has 4% carbon content.

Non-Ferrous Metals:

NON-FERROUS METALS do not contain iron. There are many different metals that fall into this group.

4.4 Metals

Metals are hard and usually shiny, containing one or more elements dug and refined from the ground

Ferrous metals are any metal that contains iron and will rust	Non-Ferrous metals do not contain iron and will not rust

Alloys are metals made from a mix of 2 metals – brass is made of copper and zinc.

Alloys:

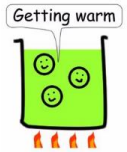
An **ALLOY** is a material of a mixture of metals or a metal and a non metal intermixed. Metal alloys have advantages. The alloy may contain the properties of two or more metals or other elements.


Food
Technology

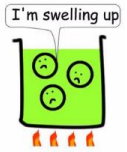
Food and Nutrition

KS3 Y8 Food Tech Knowledge Organiser

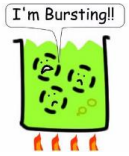
Gelatinisation: using a starch to thicken a liquid



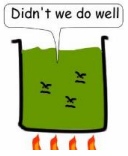
COLD
Flour particles suspended in liquid. They don't dissolve so they form a ***SUSPENSION*** (solid particles floating in a liquid)



60°C
Getting warmer… 60 degrees Celsius The walls of the flour particles soften and start to absorb water so start to swell up



HOT…… 80°C
At 80 Degrees Celsius Flour particles swell to 5 times normal size then burst, releasing their starch into the liquid thus thickening it



HOT…… 100°c
Degrees Celcius Flour particles continue to swell and burst right the way to 100°c at which point the process is complete.

Why do we need to 'knead'?
The dough is kneaded to give the bread its texture.
The protein in the flour **(gluten)** is stretched to make an elastic dough and pockets of gas are formed.

KEYWORDS
NUTRITION
MACRONUTRIENT
KNEAD
GELATINISATION
SUSPENSION
DENSE
COMPOSITE

How to check when pasta is cooked:
1. **Taste:** If it taste good, s'all good!
2. **Chop a piece in half.** If it's still white inside, cook some more.

The **Eatwell Guide** is based on the 5 food groups and shows how much of what you eat should come from each group.

The 5 different groups are:

Fruit & Veg: Vitamins and minerals
Starchy Carbs: Our body's chosen source of energy
Protein: Build & repair muscle cells, a source energy
Dairy & Alternatives: good source of calcium
Fats/oils: helps body absorb vitamins, source of energy

YouTube
foodtech 101
See FoodTech 101 for all KS3 practicals

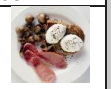
Energy value of the major 'macronutrients':
Fat: 37kJ (9 kcal) **per gram**
Carbohydrates: 17kJ (4 kcal) **per gram**
Protein: **17kJ (4 kcal) per gram**



Function of ingredients in baking:
- Butter: adds moisture/ softens
- Flour: main bulking agent
- Water: helps combine ingredients
- Salt: used to add flavour
- Fat: helps tenderize pastries & cakes
- Sugar: feeds/activates the yeast
- Warm water: perfect temp for yeast
- Oil: Prevents dough from sticking

How much of your daily calorie allowance is taken up with your favourite foods? Use the following formula to work it out:
calories (in food) x 100
RDA (recommended daily amount e.g. 1600 teen girl, 1800 teen boy)

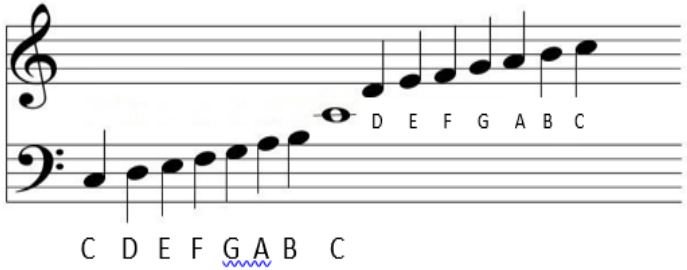
Composite Meals:

Nutrient Dense Foods=	Energy Dense Foods=
 	 

Composite meals are: meals made up of foods from different parts of the Eatwell Guide. Much of the food people eat is in the form of dishes or meals with more than one kind of food in them. For example, pizzas, casseroles, pies, lasagne, spaghetti Bolognese and sandwiches are all made with foods from more than one of the five food groups.

Music

BLUES Knowledge Organiser



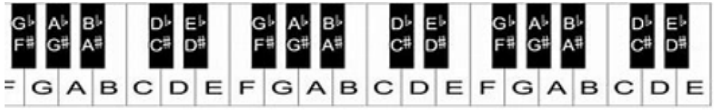
Working out a 7th chord

- 1, 3 and 5, now add a flattened 7th
- Major: R +4st +3st +3st Minor:R +3st +4st +3st

IMPROVISATION NOTES - Notes of the blues scale

Tonic		Flattened third	Fourth	Fifth		Flattened 7th	Tonic
C		Eb	F	G		Bb	C

You can also add a sharpened 4th

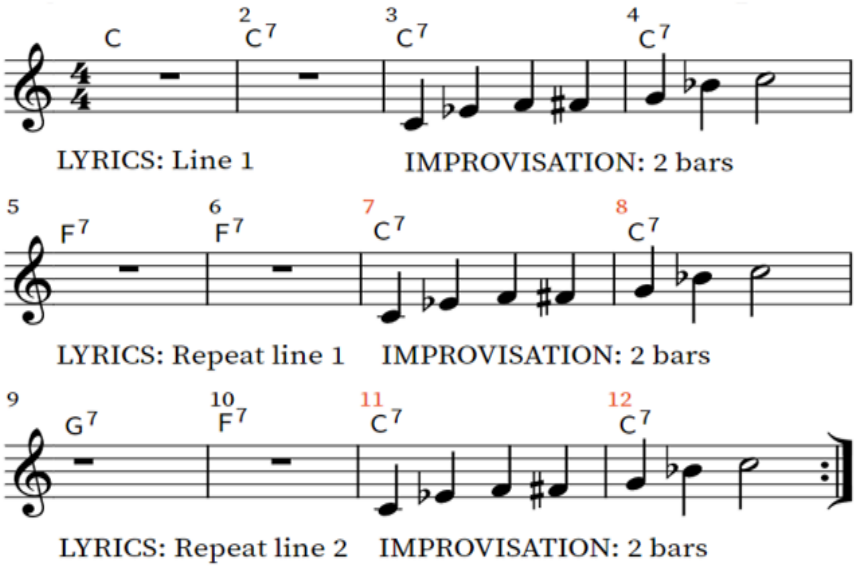


Writing lyrics

Each verse must be sad, it must rhyme and be a total of three lines, the first two are repeated.

This is line one, I repeat it in the second line
This is line one, I repeat it in the second line
It's the end, the third line, I cannot shine

PERFORMANCE STRUCTURE



Drama

Drama

Y8 Drama – Greek theatre & Antigone – HT5 & 6 – Knowledge Organiser

Greek Theatre:

- Theatre was a very big focus in Greece and started in approximately 550 BC.
- Theatre performances were in honour of an ancient Greek God called Dionysus.
- They had big festivals and theatre competitions in honour of this Greek God – Dionysus.
- There were three types of theatre; Comedy, Tragedy and Satire (making fun of leaders).
- Actors used masks and gestures to tell the story and the chorus (group of singers) told the story like narrators.

Sophocles & Antigone:

- Antigone is a tragedy by **Sophocles** written in or before 441 BC.
- Sophocles is one of three ancient Greek tragedians whose plays have survived.
- The most famous tragedies of Sophocles feature Oedipus and Antigone: they are generally known as the Theban plays.
- Of the three Theban plays Antigone is the third in order of the events depicted in the plays, but it is the first that was written.
- Sophocles wrote over 120 plays, but only seven have survived.
- Antigone is still a popular story today with many adaptations in film, theatre and opera.

Key Techniques / Vocabulary:

Exaggeration: Exaggeration is the representation of something as more extreme or dramatic than it really is. Exaggeration is used to emphasise certain ideas by overstating it in some way. This can add drama, suspense, humour, etc. for the audience.

Canon: moving or speaking one after the other like a Mexican wave

Unison: moving or speaking at the same time

Hot Seating: Hot Seating is a Drama strategy which helps actors to develop their knowledge of their character. Questions are asked to the actor sitting in the 'hot-seat' who answers in character.

Tragedy: Tragedy is a genre of drama based on human suffering and, mainly, the terrible or sorrowful events that befall a main character.

Chorus: The chorus (group of singers) stood at the side of the stage and told the story like narrators. Part of the purpose of the Greek Chorus – whilst moving in unison –was to show the emotion of a play's story with their gestures and facial expression.

Antigone - Plot:

Two brothers, Polyneices and Eteocles are each leading opposing sides. Eteocles is fighting for the current King – King Creon, and Polyneices is fighting to overthrow King Creon.

Before the play begins we learn that the brothers are both killed in battle, and so the civil war comes to an end. King Creon orders that Eteocles will be honoured and given a royal burial, but Polyneices will be disgraced. His body will be left to rot outside the battlements for the animals to pick apart and anybody who attempts to bury him will also be put to death.

Antigone and Ismene are the sisters of Polyneices and Eteocles.

Antigone brings Ismene out of the city walls at night for a secret meeting.

Antigone is devastated and desperate to bury Polyneices' body and wants Ismene to help her.

Ismene refuses. She is too scared of the death penalty, the girls argue but Ismene is unable to talk Antigone out of her decision to bury Polyneices.

The next night, Antigone sneaks out of the city walls.

She waits until the guards guarding Polyneices' body fall asleep, drags the body a short distance away and buries it.

In the morning, the guards discover the body has gone missing. They are all scared, and argue over who should tell King Creon.

Creon is raging. He suspects Antigone and orders the guards to bring her to the throne room. Creon questions Antigone, who does not deny burying her brother. Instead she openly argues with King Creon over the decision. Antigone argues that without burial her brother would never have been able to reach the afterlife.

King Creon suspects that Antigone could not have buried her brother on her own and thinks Ismene must have helped her. He orders the guards to bring Ismene. Ismene, wanting to die alongside her sister, falsely confesses to the crime but Antigone will have none of it. The sisters argue again over who was involved in burying the body.

Creon – confused over the argument, orders that both girls be put into jail for the time being.

Creon's son Haemon enters. He is engaged to Antigone and wants to convince his father to spare her life. Father and son argue, but Haemon cannot change the fact that Antigone will face the death penalty. Haemon leaves, and vows never to see or speak to his father again.

Creon decides to spare Ismene and to imprison Antigone in a cave – without food or water they will brick up the mouth of the cave so that Antigone has a slow and painful death. She is brought out of the house, and she defends her actions one last time. She is taken away, with the Chorus expressing great sorrow for what is going to happen to her.

Tiresias, the blind prophet, enters. He warns Creon that the Gods side with Antigone. Creon accuses Tiresias of being corrupt, and Tiresias responds that because of Creon's mistakes, he will lose one child for the crimes of leaving Polyneices unburied and putting Antigone into the earth. All of Greece will despise him, and the sacrificial offerings of Thebes will not be accepted by the gods.

The Chorus, terrified, asks Creon to take their advice. He starts to waiver, and they tell him that he should bury Polyneices and free Antigone. Creon, shaken, agrees to do it.

Creon leaves with his guards to help him right his previous mistakes but a Messenger enters to tell them that Haemon has killed himself.

Eurydice, Creon's wife and Haemon's mother, enters and asks the Messenger to tell her everything. The Messenger reports that Haemon and Antigone have both taken their own lives. Eurydice disappears into the palace.

Creon understands that his own actions have caused these events. A Second Messenger arrives to tell Creon and the Chorus that Eurydice has killed herself. With her last breath, she cursed her husband.

Creon blames himself for everything that has happened, and, a broken man, he asks his servants to help him inside. The order he valued so much has been protected, and he is still the king, but he has acted against the gods and lost his child and his wife as a result.

The Chorus closes by saying that although the gods punish the proud, punishment brings wisdom.