

# Year 7 Knowledge Organiser



# Contents

Page	Subject
3	Maths
5	English
7	Science
12	History
17	Geography
20	Religious Studies
22	Spanish
24	IT
26	Art
28	Design Technology
31	Food Technology
33	Music
35	Drama

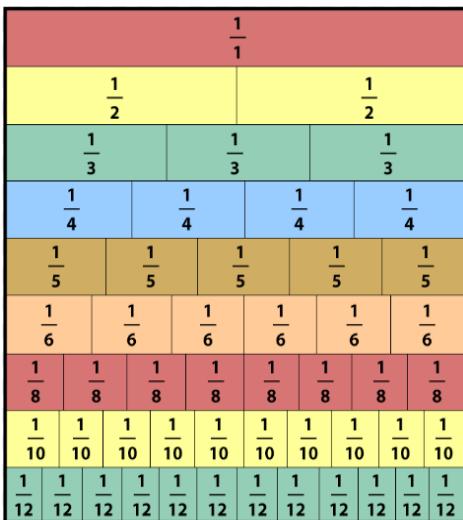


# Maths

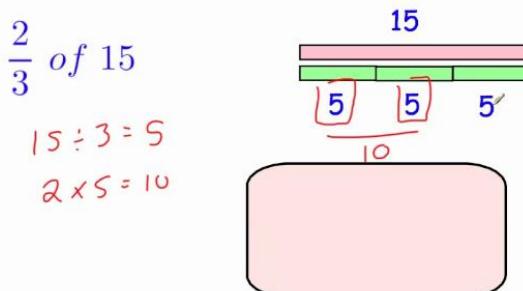




## Fraction wall



## Fraction of an amount



## Fractions

Inequality Symbols	
$\neq$	not equal
$<$	less than
$\leq$	less than or equal to
$>$	greater than
$\geq$	greater than or equal to

### Compare Fractions

Using Cross Multiplication

Example:

$$5 \times 4 = 20 \quad \frac{4}{7} \quad \frac{3}{5} \quad 7 \times 3 = 21$$

E

$20 < 21$

$$7 \times 2 = 14 \quad \frac{2}{3} \quad \frac{4}{7} \quad 3 \times 4 = 12$$

E

$14 > 12$

$$5 \times 4 = 20 \quad \frac{4}{10} \quad \frac{2}{5} \quad 10 \times 2 = 20$$

E

$= 20$

**Improper Fraction**  
Numerator > Denominator

$$\frac{7}{3} \rightarrow 2\frac{1}{3}$$



**Mixed Number**



## Adding & Subtracting fractions

- (a) These fractions do not have the same denominator, so the first step is to change them so that they do. In this case, we can use 20 as the common denominator.

$$\frac{1}{4} + \frac{2}{5} = \frac{5}{20} + \frac{8}{20} = \frac{5+8}{20} = \frac{13}{20}$$

- (b) In this case we can use a common denominator of 12.

$$\frac{2}{3} - \frac{1}{4} = \frac{8}{12} - \frac{3}{12} = \frac{8-3}{12} = \frac{5}{12}$$

# English





# English - Oliver Twist - Charles Dickens



## Context

Charles Dickens clearly understood the poverty in London during the 1800s, as he himself was a child worker after his father was sent to debtors' prison. His appreciation of the hardships suffered by impoverished citizens stayed with him for the rest of his life and was evident in his writing. Dickens began writing Oliver Twist after the adoption of the Poor Law of 1834, which stopped government payments to the able-bodied poor unless they entered workhouses. Therefore, Oliver Twist became a story clearly aimed directly at the problem of poverty in 19th-century London.

## Drama Terminology:

**Act/ Scene** An act is a division or unit of a theatre work. Plays usually have 2-3 Acts – Shakespearean plays had around 5. A scene is a part of an act defined with the changing of characters.

**Characters** People acting in a playscript

**Setting** Setting is the time and place (or when and where) of the story

**Audience** The people who watch the performance; those for whom the performance is intended.

**Dialogue** The dialogue refers to the words that will be spoken by the actors.

**Colon** The colon ( : ) is a punctuation mark that is put before a reveal of information.

**Stage Directions** information for actors about how to act – usually in italics or brackets.

## Techniques:

**Metaphor** – saying that something is something else – 'She's a star'

**Simile** – comparing two things using 'like' or 'as' – 'She shone like a star'

**Personification** – giving an item human qualities/features – 'The stars winked at me'

**Imagery** – where a piece of writing creates an image in a reader's head

**Foreshadowing** – a warning or indication of a future event

**Simple Sentence:** a sentence with just one independent clause

**Compound Sentence:** a sentence with two independent clauses, that are joined by a co-ordinating conjunction

**Complex Sentence:** a sentence with a subordinate clause and an independent clause

**Minor Sentence:** a short sentence – usually one or two words – that doesn't have a main verb or subject.

## Plot Summary

Oliver Twist is born in a workhouse in 1830s England. He is transferred to a workhouse for adults after 9 years. After the other boys bully Oliver into asking for more gruel at the end of a meal, Mr. Bumble, the parish beadle, offers five pounds to anyone who will take the boy away from the workhouse. He is eventually apprenticed to a local undertaker, Mr. Sowerberry. Desperate, Oliver runs away at dawn and travels toward London. Outside London, Oliver meets Jack Dawkins. Jack offers him shelter in the London house of his benefactor, Fagin. It turns out that Fagin is a career criminal who trains orphan boys to pick pockets. After a few days of training, Oliver is sent on a pickpocketing mission with two other boys. When he sees them swipe a handkerchief from an elderly gentleman, Oliver is horrified and runs off. He is caught by the police. Mr Brownlow understands his innocence and tries to help Oliver, but he is kidnapped by Sikes and returns back to Fagin's lair. Sikes' girlfriend, Nancy, realises that Fagin wants Oliver for his inheritance (with the help of a man named Monks) and sees that she must set things right. She meets with Mr Brownlow and explains that Oliver is in danger. When word of Nancy's disclosure reaches Sikes, he brutally murders Nancy and flees London. Pursued by his guilty conscience and an angry mob, he hangs himself while trying to escape. Mr. Brownlow confronts Monks and squeezes the truth about Oliver's parentage from him. Monks has been pursuing Oliver all along in the hopes of ensuring that his half-brother is deprived of his share of the family inheritance. Mr. Brownlow forces Monks to sign over Oliver's share to Oliver. Finally, Mr Brownlow adopts Oliver and he has a secure and comfortable home in the countryside.

## Characters

**Oliver** He is a 'pale, thin' orphan who is treated badly by almost everyone he meets. He tries his best to be a good person and experiences 'horror and alarm' whenever he sees crimes being committed.

**Mr. Bumble** The man who runs the workhouse and gives Oliver his name. He is 'a fat man' who enjoys power and doesn't care about the people beneath him.

**Noah Claypole** A 'malicious and ill-conditioned' boy who bullies Oliver at the undertakers. He eventually runs away to London and joins the same gang as Oliver.

**Fagin** An old man who runs the gang of pickpockets. He seems kind but his 'villainous-looking and repulsive face' reflects his selfish nature as he gets young boys to do his dirty work for him.

**Jack Dawkins (The Artful Dodger)** A young boy who introduces Oliver to Fagin's gang who has 'all the airs and manners of a man'. He's confident and cunning.

**Bill Sikes** A 'rough man' who has been a criminal for many years. He beats his dog viciously and brutally kills his girlfriend, Nancy.

**Nancy** Bill's girlfriend who risks her life to help Oliver escape from the gang. She loves Bill even though he treats her abusively and she feels guilty about the life of crime she has led.

**Mr. Brownlow** A wealthy older gentleman who takes Oliver in and looks after him. He believes in Oliver's goodness even when it looks like Oliver has stolen from him and eventually finds out the truth about Oliver's parents.

# Science





## Reproduction

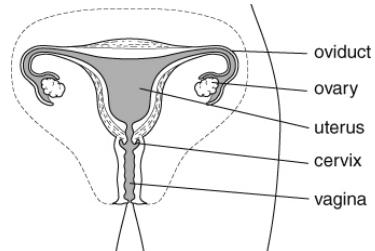
Reproduction produces new living things (**offspring**). Two **parents** are needed for **sexual reproduction**.

Males and females have **reproductive systems**, which contain **reproductive organs** to allow them to reproduce. The ovaries and testes produce **gametes** or **sex cells**.

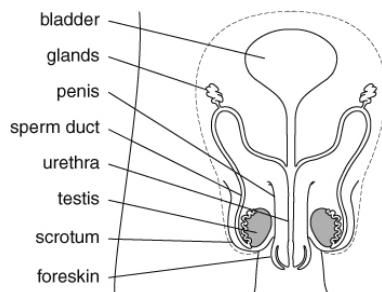
## Sexual intercourse in mammals

During **sexual intercourse**, **semen** (sperm cells mixed with special liquids from the **glands**) is forced out of the penis and into the top of the **vagina**. This is called **ejaculation**. The semen travels into the top of the **uterus** and the sperm cells then swim down the **oviducts**.

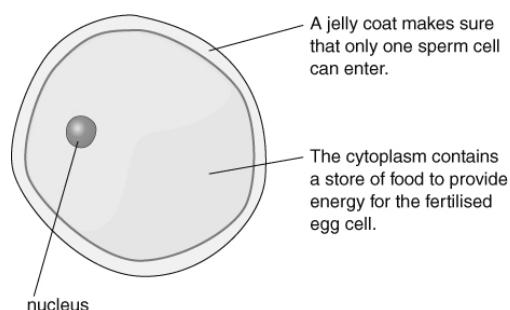
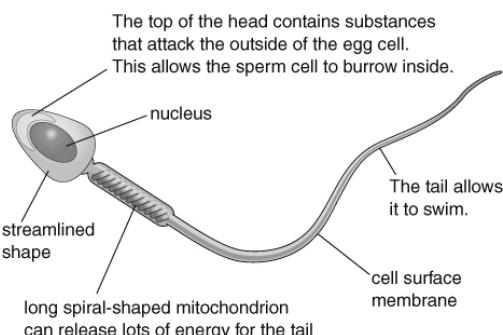
Sperm and egg cells are **adapted** to their **functions**. A sperm cell is much smaller than an egg cell.



The female reproductive system

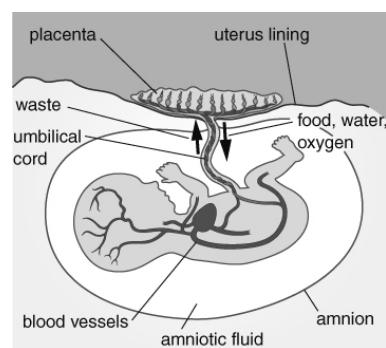


The male reproductive system



## Pregnancy in mammals

If an egg cell meets a sperm cell in an oviduct, **fertilisation** can occur (the nuclei from the two cells **fuse**). The **fertilised egg cell** divides to form a ball of cells (an **embryo**). The embryo travels to the uterus where it sinks into the uterus lining (**implantation**). The woman is now **pregnant**. Once the embryo has developed all its organs it is called a **fetus**. It takes about 40 weeks (9 months) for a human fertilised egg cell to grow into a baby ready to be born. This time is called the **gestation period**.





While inside the uterus, the fetus is supplied with oxygen and food by the **placenta**. The placenta also gets rid of waste (especially carbon dioxide) from the fetus. The **umbilical cord** connects the fetus to the placenta.

If a mother smokes, drinks too much alcohol or takes drugs while pregnant, she might damage the baby. The baby might be **premature**.

## Birth in mammals

- The uterus starts **contractions** and the woman goes into **labour**.
- The muscles of the **cervix** relax.
- The baby is pushed out head first through the cervix and the vagina.
- The baby starts to breathe and the umbilical cord is cut. The scar left behind is the **navel**.
- Then the placenta is pushed out of the uterus. This is the **afterbirth**.

The mother's breasts contain **mammary glands** that produce milk to feed the baby. Breast milk contains all the nutrients that a baby needs and **antibodies**, which help destroy micro-organisms that might cause diseases.

## Growing up

The stages through which an organism goes as it grows and develops are its **lifecycle**. In the human lifecycle, a baby grows into a child. Between the ages of 10 and 14 years, most children start to go through **puberty**. During puberty, **sex hormones** cause big physical changes to occur. **Adolescence** is the time when emotional as well as physical changes occur. It ends at about 18.

Changes in boys	Changes in girls
● hair grows under arms, on face and on chest	● hair grows under arms
● pubic hair grows	● pubic hair grows
● shoulders get wider	● hips get wider
● body smell increases	● body smell increases
● testes start to make sperm cells	● ovaries start to release egg cells
● testes and penis get bigger	● breasts develop
● voice deepens ('breaks')	

After puberty, animals are able to sexually reproduce. Men produce sperm cells for the rest of their lives. Women stop releasing egg cells at the age of 45–55 and this is called the **menopause**.

In all mammals fertilisation happens inside the female. This is called **internal fertilisation**. In some animals (e.g. frogs, fish) fertilisation happens outside the female (**external fertilisation**).

The fertilised egg cells of many animals also grow and develop outside their parents. This is called **external development**. Amphibians, birds and fish use external development. Humans use **internal development** and produce fewer offspring than animals using external development because the growing embryos are protected inside the mother.



# Science: 7K



## Forces

**Forces** are pushes or pulls. Forces can:

- change the shape or size of an object
- change the speed things are moving (make them move faster or slower)
- change the direction of a moving object.

The unit for measuring force is the **newton (N)**.

**Friction** is a force caused by two things rubbing together. **Air resistance** and **water resistance** are kinds of friction.

Solid things, like your chair, push up on you when you sit on them. Upwards forces from water or air are called **upthrust**. Things float in water because of upthrust.

**Contact forces** only act when two objects or materials are touching. Examples of contact forces are:

- friction
- air resistance
- water resistance
- upthrust.

Some forces can have an effect without objects touching. They are called **non-contact forces**. There are three non-contact forces:

- **magnetism**
- **gravity**
- **static electricity**.

## Weight and mass

Your **mass** is the amount of substance in your body. Your mass is measured in **kilograms (kg)**.

Your **weight** is a force caused by gravity pulling on your body. The newton (N) is the scientific unit used to measure forces, and so it is also used as the unit for weight.

Wherever you take an object, its mass will not change but its weight depends on the force of gravity. An object on the Moon would have a smaller weight than on Earth, because the Moon's gravity is not as strong as Earth's.

## Measuring forces

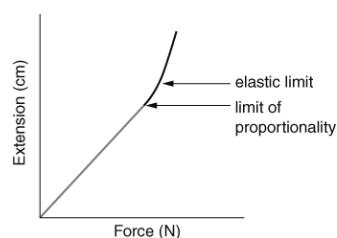
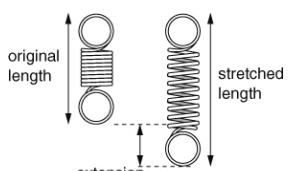
**Elastic** materials will stretch with a force and then return to their original shape when the force is taken away. Springs are elastic. The extension of a spring is the difference between its original length and its stretched length.

The extension of a spring is **proportional** to the force on it. This is called **Hooke's Law**.

If the spring is stretched too far, the extension stops being proportional to the force. If it is stretched even further, it goes beyond its **elastic limit**. The spring will no longer return to its original length when the force is removed.

Force meters have springs inside them.

Materials like Plasticine® will stretch with a force but they will not return to their original shape afterwards. Plasticine® is a **plastic** material.





## Friction

Friction is a contact force. Friction can:

- slow things down
- produce heat
- wear things away
- cause a noise.

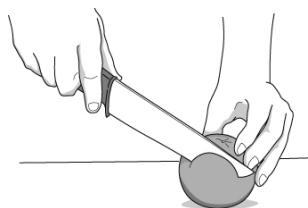
Friction can be increased by using rough surfaces, or by using materials such as rubber that have a lot of friction.

Friction can be reduced by using smooth surfaces, or by lubrication. Oil and grease are examples of lubricants, and help things to move past each other easily.

## Pressure

**Pressure** is the amount of force pushing on a certain area.

For a certain area, the bigger the force, the bigger the pressure. For a certain force, the bigger the area, the smaller the pressure.



Sharp knife – a small area giving a large pressure.



Snow shoes – a large area giving a small pressure.

We can work out the pressure under an object using this formula:

$$\text{pressure} = \text{force} \div \text{area}$$

## Balanced and unbalanced forces

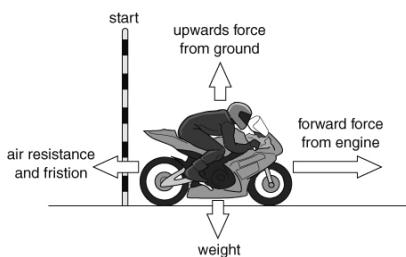
**Balanced forces** are forces on an object that are the same size but work in opposite directions.

If forces are balanced:

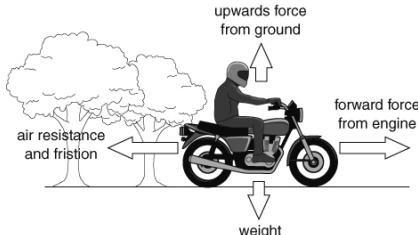
- a stationary object stays stationary
- a moving object continues to move at the same speed and in the same direction.

If there are **unbalanced forces** on an object:

- a stationary object will start to move
- a moving object will change its speed or direction.



Unbalanced forces – the motorbike will speed up.



Balanced forces – the motorbike will continue to move at a steady speed.

A car or motorbike uses the energy stored in fuel to move at a steady speed because it needs a force from the engine to balance the forces of air resistance and friction.

# History



# History - Medieval Realms



## King John and the Magna Carta

### King John (1199-1216)

Brother of the popular King Richard I, who died shortly after his return from the 3rd Crusade. John was suspicious and had rebelled against both his father and brother. John inherited the cost of his brother's costly wars, but was a cruel and incompetent king.



### Why were the barons angry at King John?

- Raised taxes for wars John lost!
- Took away barons power
- Tried to control the church
- Exerted power in Ireland, Wales and Scotland
- France rebelled against him

**Medieval monks** portrayed King John as an evil monster. This is because he tried to control the church and fell out with the Pope!

**Modern historians** portray him as an energetic king who tried to increase his power in difficult circumstances.

### The Road to the Magna Carta

The barons were angry with John and no compromise could be agreed. The barons issued a royal charter of demands which John was forced to accept on the field of Runnymede on **15th June 1215**. This became known as the **MAGNA CARTA**.

Some of the key terms of this were:

- It promised the protection of church rights
- Protection from illegal imprisonments
- All people were to be tried by jury.
- New taxation only with the consent of the barons

The charter defined that a formal relationship should exist between the monarch and barons. The king was now subject to the law. These were radical ideas!



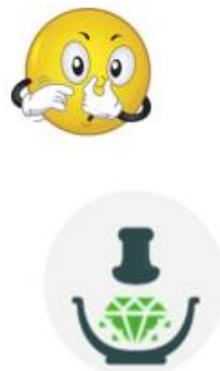
### Consequences of the Magna Carta

The power of the king was permanently damaged, and no king of England ever had 'unrestricted' power again. It was the beginning of democracy and formed the basis of the Universal Declaration of Human Rights (1948).

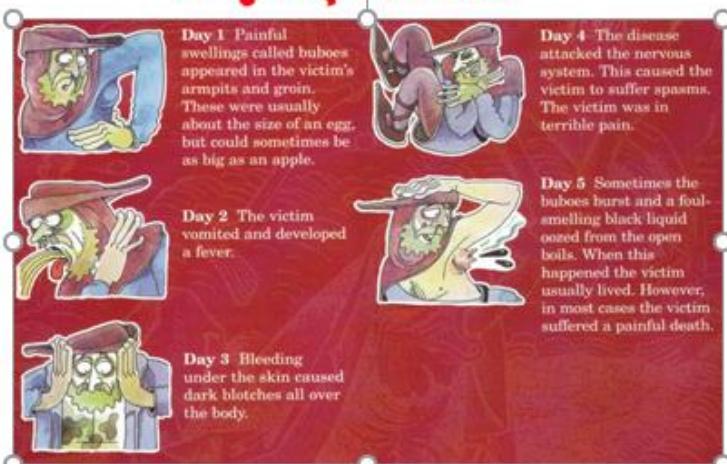


## Causes

- God (punishment for sins)
- Miasma (bad air)
- Astrology
- Four Humours



## Symptoms



## THE BLACK DEATH

## Treatments

- Rubbing onions on the buboes
- Praying to God
- Drinking vinegar
- Eating crushed emeralds
- Balancing the Four Humours by bleeding or purging (being sick)



## Consequences

- **Political** – Peasants for the first time had some power, as most of the workforce died. They were able to demand higher wages.
- **Social** – Art and architecture changes to reflect the Black Death, and art has more solemn themes. Latin became less widely spoken, and most texts are now written in English.
- **Economic** – Countries are afraid to trade with each other for fear of spreading the Black Death, so the economy is affected.
- **Religious** – Most of the priests and monks die of the Black Death as they would visit and comfort the dying. They were replaced with rubbish priests who could not even read or write!

## Preventions

- Filling the house with strong smelling herbs to stop the miasma
- Boiling vinegar or onions
- Flagellation (whipping yourself)





# History - Medieval Realms



## THE PEASANTS' REVOLT KNOWLEDGE ORGANISER



**Overview and Map**

**What was The Peasants' Revolt?**  
The Peasants' Revolt, also known as Wat Tyler's Rebellion or The Great Uprising, was a major uprising that took place across large parts of Britain in 1381.

Large numbers of poorer citizens in society (mainly from rural backgrounds) began refusing to pay taxes, aggressively confronting tax collectors, burning government buildings, and opening jails.

Unrest centred around London, but extended as far north as York and Scarborough, and as far west as Somerset. It prompted military action by the end of June, when at least 1,500 rebels were executed.

**Why were the causes and effects of the Peasants' Revolt?**  
Amongst the reasons why the revolt started were social, political, and economic tensions resulting from the Black Death, including laws being imposed to prevent working classes from demanding high wages. Furthermore, tensions arose from the high taxes being raised for the unpopular Hundred Years' War with France.

The lasting effect of the uprising has been debated by historians for many years. Some argue that grants offered to the rebels were rescinded, and the rebellion was violently quelled, there was little lasting social impact. However, the following governments ceased the practice of levying taxes to support the war in France.

**The Peasants' Revolt, 1381**

Causes of the Uprising			
<b>The Black Death</b>		The Black Death was an epidemic that wiped out between 30 and 60% of the population of the country, meaning that there was a shortage of workers and wages went up. People who had previously worked for very little began to charge lots of money for their services.	In the UK, the Black Death was prevalent between 1348 and 1350.
<b>Statute of Labourers</b>		In response to the demands for higher wages, the government passed the Statute of Labourers, which set a maximum wage. It also dictated that those who refused to work for the stated wage would be punished with prison. This meant that despite the demand for workers, the rich stayed rich and the poor remained poor.	The Statute of Labourers was passed in 1351.
<b>Hundred Years' War</b>		The Hundred Years' War was a series of conflicts between the Kingdom of England and the French House of Valois, over the right to rule over France. As its name suggests, it was a long war, which cost a huge amount and claimed many lives. It had become very unpopular in England.	The Hundred Years' War lasted from 1337 to 1453.
<b>Poll Tax</b>		In 1377, the Hundred Years' War was going badly for England. In order to try and turn the war in their favour, and meet the soaring costs, the English government levied the first Poll Tax. The poor were angry that the Poll Tax was the same amount regardless of age or occupation. Over the next four years, 3 Poll Taxes were levied.	1377 to 1381 After the Peasants Revolt, no more Poll Taxes were levied against citizens.

**Key People**

**Wat Tyler** – Wat Tyler was the leader of the Peasants' Revolt, who marched a group of rebels from Canterbury (Kent) into London. As multiple groups converged at London, Tyler emerged as their leader. He led the attack of civil targets, including the Tower of London, but he thought that he possibly lost control of some of the rioters, whose actions were even more violent. Refusing Richard II's initial concessions (granted in an initial meeting on 15<sup>th</sup> June), Tyler met with him and government officials again at Smithfields on 15<sup>th</sup> June, where his 'rude and disgusting' manner caused tensions to rise, and he was killed by William Walworth, the Lord Mayor.

**John Ball** – John Ball was a radical priest who took a leading role in whipping up support for the revolt. Much of what is known about Ball comes from hostile sources of the established church order (to which he had few ties) who lamented his views and practices. He was dedicated to social equality, which led to him delivering sermons on the matter in a range of rural towns across the country. He also preached in English, rather than Latin, which upset the status quo. His views landed him in prison several times, including just before the uprising. He was released in time to preach at Blackheath. After the peasants were dispersed, he was taken prisoner at Coventry, and was hung, drawn and quartered in the presence of Richard II shortly afterward.

**Thomas Bakeler** – Thomas Bakeler was an English landowner, and was one of the leaders who initiated the Peasant's Revolt. It was he who initiated the incident in Fobbing, where Thomas Bakeler attempted to collect Poll Tax from the villagers. The villagers, led by Bakeler, would not give him anything, forcing him to leave empty-handed. When the Sheriff of Justice was sent to investigate this act of rebellion, Bakeler was attacked, launching the revolt. For his part in the uprising, Bakeler was drawn and hanged on 4<sup>th</sup> July 1381.

**John of Gaunt** – John of Gaunt was Richard II's uncle, and yielded considerable power in decision-making regarding the country's affairs. He was unpopular, and introduced the Poll Tax as a means to pay for the war against France. This was the same amount for all adults, regardless of their age or occupation. In March 1381, the government (led by Gaunt) demanded a third Poll Tax in four years, sparking the events that led to the revolt. Throughout the unrest, Count's home in London was burnt down by protesters.

Major Events and Key Information					
<b>Revolt begins in Fobbing and Brentwood</b>		Commissioneer Thomas Bakeler entered the village of Fobbing in Essex, in order to get the taxes that villagers had refused to pay. Dispersed by his guard at Fobbing, the villagers began to revolt. Bakeler was lucky to escape with his life, but some of his clerks did not.	30 <sup>th</sup> May 1381	The villages, armed with old bows and staves, ready for revolt!	
<b>March to London</b>		Soon most of the south-east was in revolt, and led by Wat Tyler (Kent) and Jack Straw (Essex) and other important men from the villages (e.g. neevess, priests) they marched on London. They sent letters inviting others to join.	7-12 <sup>th</sup> June 1381	A sympathizer from within London opened the gates!	
<b>Rampage in London</b>		When the rebels entered London, they caused significant damage, targeting in particular prisons, priories, and John of Gaunt's Savoy Palace residence. They also killed several government officials.	12 <sup>th</sup> -14 <sup>th</sup> June 1381	The King initially took refuge in the Tower of London.	
<b>Rural revolt</b>		Revolts simultaneously occurred across the rest of the country, particularly in the cities of the north – York and Scarborough were the scenes of notable riots. In the Somerset Town of Bridgwater, nobles were killed.	30 <sup>th</sup> May – 26 <sup>th</sup> June 1381	Some nobility used their wealth to stay safe!	
<b>Wat Tyler is killed</b>		King Richard II met with Wat Tyler, who had refused earlier deals. The meeting started well, but as Tyler grew more aggravated and rude to the King, the Lord Mayor William Walworth stepped in and killed him. The King then promised to the remaining rioters to abolish serfdom.	15 <sup>th</sup> June 1381	The revolt almost immediately collapsed with the death of Wat Tyler.	
<b>Leaders are executed</b>		The promises of the King and other leaders were not kept. Serfdom was not abolished, and the leaders of the unrest were tracked down and executed. The last resistance was made by the Bishop of Norwich, Walsham on 26 <sup>th</sup> June.	15 <sup>th</sup> – 26 <sup>th</sup> June 1381	Henry le Despenser led the armed troops.	
<b>Aftermath</b>		Despite being ultimately quashed, the rebels appear to have frightened the rich into not pushing the price too far – no Poll Tax was collected again until 1390. Over the next fifty years, peasants slowly worked for more money, and gained more freedoms from Lords.	After 26 <sup>th</sup> June 1381	Some believe the events made Richard over-confident, leading to his downfall.	

### Peasants' Revolt Timeline

1348-1350 – Black Death kills huge number of farm labourers, driving up wages.	1351 – Statute of Labourers imposes wage limits.	1369 – Events worsen in the unpopular war with France.	1377 – Aged 10; Richard II becomes King. Government introduces poll tax.	30 <sup>th</sup> May 1381 – Tax Collector dismissed in Fobbing. Argument turns into riot.	30 <sup>th</sup> May 1381 – Other villages copy Fobbing.	7 <sup>th</sup> -12 <sup>th</sup> June 1381 – Peasants march from Kent, Essex and Suffolk to London.	12 <sup>th</sup> -14 <sup>th</sup> June – Peasants storm London, killing senior figures and setting buildings on fire.	15 <sup>th</sup> June 1381 – Richard meets rebels at Smithfields.	25 <sup>th</sup> -26 <sup>th</sup> June 1381 – Battle of North Walsham
--	--	--	--	---	--	--	--	---	--



# **Research:**

Research who Richard I was and what the Crusades were

**Beeston Castle:**

When was it built?

Why was it built?

What type of Castle was it?

Why were Monasteries important during the Medieval Period

# Geography

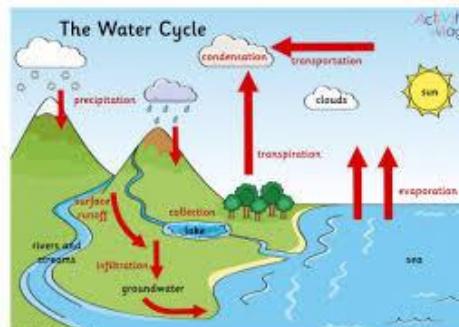


# Geography - Rivers and Glaciers Shape The Coast



## Key Words:

- Erosion
- Hydraulic action
- Transportation
- Deposition
- Waterfall
- Meander
- Source
- Mouth
- Drainage basin
- Precipitation
- Upper course
- Middle course
- Lower course
- Abrasion
- Plucking

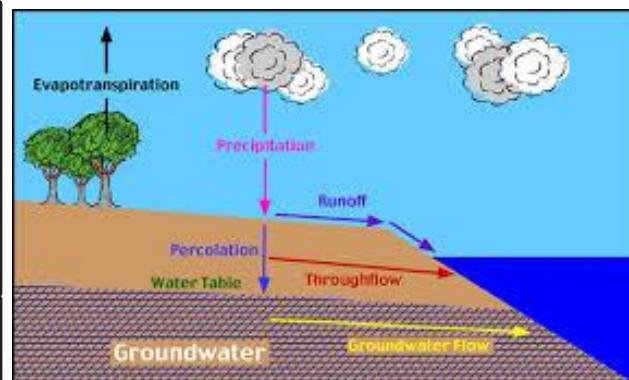


All the water that has ever been on our planet is still here. It moves through the land the water and the atmosphere and it can be a solid in ice, a liquid in rivers and sea and a gas as it is evaporated.

Once the rain falls and the water hits the ground it can move through the land in a number of ways.

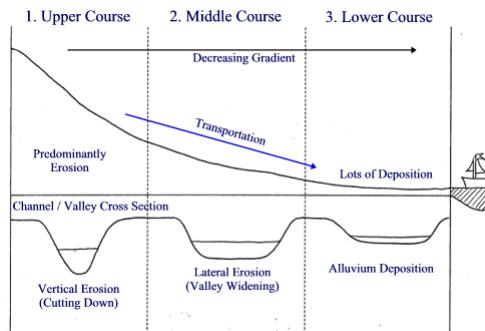
**Surface flow, through flow and groundwater flow.**

Eventually all the rainwater that falls onto the ground will end up back in the sea.



The fastest route for the water to get into rivers is surface flow. Building on the ground increases surface flow and can increase the risk of rivers **flooding**.

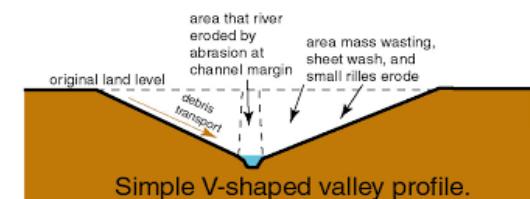
As a river flows towards the sea it will change shape. **The Long profile** is how it changes from the source to the mouth and the **cross profile** is how the river channel changes from source to mouth.



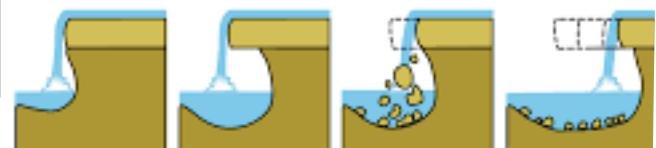
**The UPPER course** of the river is where the source of the river is found. This is usually in the mountains and hills where there is high rainfall. Features here are V shaped valleys, interlocking spurs and waterfalls.



High Force  
is a  
waterfall  
on the  
River Tees



The formation of a waterfall

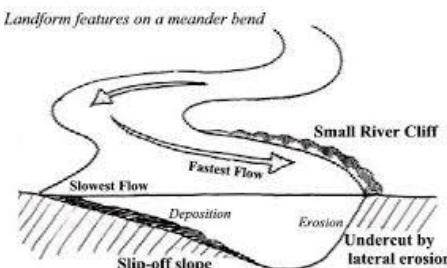
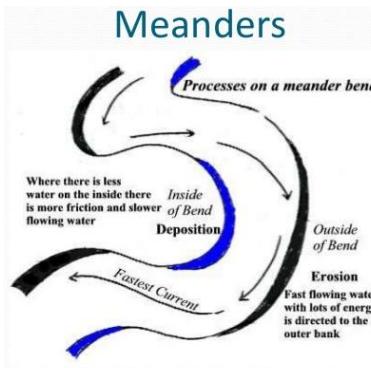


1. Waterfalls typically form in the upper stages of a river. They occur where a band of hard rock overlies a softer rock. Falling water and rock particles erode the soft rock below the waterfall, creating a plunge pool.
2. The soft rock is undercut by erosional processes such as hydraulic action and abrasion creating a plunge pool where water and debris swirl around eroding the rock through corrosion further deepening it and creating an overhang.

# Geography - Rivers and Glaciers Shape The Land

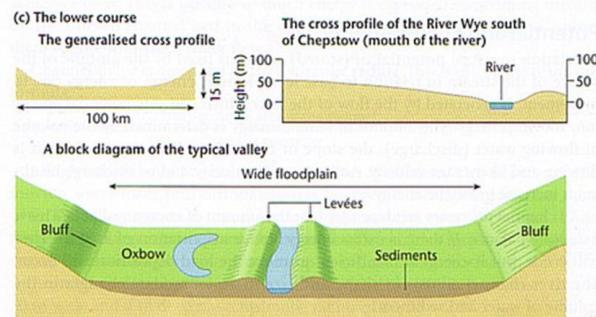


**The Middle course** of a river is characterised by both erosion and deposition



**A meander** is a key feature of the middle course of the river. As a meander becomes more extreme in its shape the neck becomes narrow. Over time the river breaks through the neck to form an **Ox-Bow lake**.

**The Lower course** of the river is characterised by deposition. As the river reaches the sea the flow is slowed.



A wide **flood plain** and **natural levees** are features of deposition found in the lower course of the river.

Along the journey of the river **humans can have an effect**. Rivers can be dammed to create hydro electricity, pollution from factories can get into the water. In some places rivers are straightened to speed the flow to help to reduce flooding. Rivers are used to transport goods and for leisure activities too.

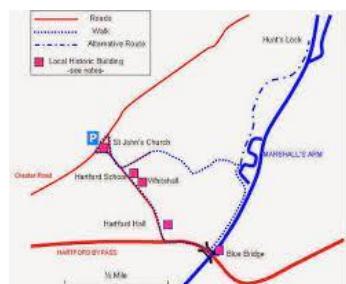


The River Weaver is our local river. Where it meets the river Dane in town is known as a **CONFLUENCE**



In many places the river Weaver has been artificially straightened this was done to allow the salt boats to reach the salt mines and the Mersey for export

One place this has happened is at Marshalls Arm.



# Religious Studies





# JUDAISM

## Overview

**Judaism** is one of the world's major religions. It is the **world's 10<sup>th</sup> largest religion**, with about 14.6 million followers. It is around 4,000 years old.

**Jews** are the people who follow Judaism. Like Christians and Muslims, Jews believe that there is only one God, who created the world and everything in it.

**Abraham** is seen as the father of the Jewish religion. Jews believe that Judaism began when he started worshipping one God instead of many.

Judaism began in the **Middle East** – but there are now Jewish people all across the world.

The main holy book of Judaism is the **Torah**, written in **Hebrew**. **Synagogues** are Jewish worship buildings.

Image of the Great Synagogue of Florence, in Italy, Europe.



## Jewish Beliefs

### The Four Stages of Life

-Jews believe in four important stages of life, and mark each with a religious ceremony.  
-The four are: birth, becoming an adult, marriage and death.  
  
-When Jewish boys (aged 13) and Jewish girls (aged 12) become Jewish adults, they have a bar mitzvah (for boys) or bat mitzvah (for girls) ceremony. At these ages, Jewish religion, law and social life judges that the boys and girls become responsible for their own actions. The ceremony is usually held on the first Shabbat (Jewish day of rest) after their birthday. In a bar mitzvah ceremony, a boy must read passages from the Torah.

### The Story of Abraham

-Abraham is an important figure in Judaism, Christianity and Islam. His story is told in the Genesis section of the Bible.  
  
-According to the story, Abraham made an agreement with God, in which he promised to be faithful and to teach his laws to the world. In return God gave Abraham and his descendants the land of Israel. Even though Abraham was 99, and his wife Sarah 90, God enabled them to have a son, Isaac, forming the first Jewish family.

### Ceremonies and Festivals

-Jews enjoy many ceremonies and festivals as a part of their religion.  
  
-Passover takes place in March or April, and is when Jewish people remember how God brought them out of Egypt (the Exodus). A special meal is created to remind the Jews of the good and bad times in the past. It includes hard boiled egg, parsley, boiled potato, lettuce, horseradish, chopped apples and walnuts.  
  
-Hannukah takes place in December and is known as 'the Jewish festival of lights.' People light candles, exchange presents, and eat foods such as latkes (potato pancakes) and sufganiot (jam doughnuts).



## KNOWLEDGE ORGANISER



### Answers to Important Questions and Key Vocabulary

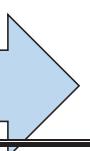
Where and how do Jews worship? Why?	 	-Synagogues are where Jewish people go to worship. -In Orthodox synagogues, men and women sit separately. In progressive synagogues, men and women can sit together and worship. -Synagogues have large rooms for prayers, and normally smaller rooms for studying. -The front of a synagogue faces towards Jerusalem. -There is always a raised platform called a Bimah.	Key Vocabulary
What is the Torah?		-The Torah is the Jewish holy book. -They are written in Hebrew on rolls of parchment. The scrolls are never touched when they are read from – readers use a pointer called a yad.	Synagogue Abraham Passover Hanukkah Bar Mitzvah Bat Mitzvah Middle East Exodus Jerusalem Yad
Where do most Jews live in the world?		-There are around 14.6 million Jews in the world. -Two countries – the United States and Israel – have 81% of the world's total Jewish population. -Some of the other countries with substantial Jewish populations include France, Canada, Russia, the United Kingdom, Argentina and Germany. -There were 17 million Jews in 1939, but this was reduced to 11 million by 1945 due to the Holocaust.	
How many different types of Jews are there?		-There are many different branches of Judaism. -Some Jews still follow all of Judaism's original laws and customs – these are called Orthodox Jews. -Jews who do not follow all of these traditions are called Progressive Jews. Progressive Jews are happy to be flexible with certain Jewish laws, in order to fit in with their modern, everyday lives.	

### Top 10 Facts!

1. Jews believe in one God, that is a spirit and has no physical form.
2. A kippah is the clothing item that many Jewish men wear on their head.
3. Praying is very important in Judaism – there are prayers for every occasion.
4. Jesus was born into the Jewish religion, but began preaching his own ideas.
5. Many Jewish homes have a family box, and give to those in need.
6. Strict Jews are not allowed to travel or watch TV on the day of Shabbat!
7. Jewish New Year takes place in September/October time, and is called Rosh Hashanah.
8. Jews fast for 25 hours and pray during Yom Kippur.
9. Anne Frank was a famous Jewish girl, who was killed in the Holocaust.
10. The Anne Frank House and Secret Annex, in Amsterdam, Netherlands, remains one of Europe's busiest tourist attractions.

## Judaism Timeline

1713 BC: Abraham forms the first covenant with God.	1250 BC: The Exodus – people of Israel freed from Egypt.	993 BC: King David establishes a capital city in Jerusalem.	970 BC: King Solomon constructs the First Temple.	66 AD: The Jews revolt against Roman rulers.	70 AD: The Second Temple in Rome is destroyed, and many Jews are forced to leave Israel.	1930s-1945: 6 million Jews are killed by the Nazi German regime in the Holocaust in Europe.	1948: The modern state of Israel is established. Its capital is Jerusalem.
---	--	---	---	--	--	---	--



# Spanish





# Spanish



Mi insti

Los números		
1 - uno	11 - once	21 - veintiuno
2 - dos	12 - doce	22 - veintidós
3 - tres	13 - trece	23 - veintitrés
4 - cuatro	14 - catorce	24 - veinticuatro
5 - cinco	15 - quince	25 - veinticinco
6 - seis	16 - dieciséis	26 - veintiséis
7 - siete	17 - diecisiete	27 - veintisiete
8 - ocho	18 - dieciocho	28 - veintiocho
9 - nueve	19 - diecinueve	29 - veintinueve
10 - diez	20 - veinte	30 - treinta
		31 - treinta y uno

Días de la semana	
Lunes	Monday
Martes	Tuesday
Miércoles	Wednesday
Jueves	Thursday
Viernes	Friday
Sábado	Saturday
Domingo	Sunday

Meses del año	
Enero	January
Febrero	February
Marzo	March
Abril	April
Mayo	May
Junio	June
Julio	July
Agosto	August
Septiembre	September
Octubre	October
Noviembre	November
Diciembre	December

Las asignaturas	
(El) inglés	English
(El) español	Spanish
(El) francés	French
(El) arte	Art
(El) teatro	Drama
(La) religión	R.E
(La) educación física	P.E
(La) música	Music
(La) geografía	Geography
(La) historia	History
(La) tecnología	D.T
(La) informática	I.C.T
(Las) ciencias	Science
(Las) matemáticas	Maths

Los adjetivos	
Divertido	Good
Aburrido	Bad
Práctico	Great
Raro	OK / Regular
Tonto	Awful
Interesante	Nice
Emocionante	Nasty
Difícil	Ugly
Fácil	Pretty

La hora	
A la(s) ... en punto	At ... on the dot
A la(s) ... y cinco	At 5 past ...
A la(s) ... y diez	At 10 past ...
A la(s) ... y cuarto	At quarter past ...
A la(s) ... y veinte	At 20 past ...
A la(s) ... y veinticinco	At 25 past ...
A la(s) ... y media	At half past ...
A la(s) ... menos veinticinco	At 25 to ...
A la(s) ... menos veinte	At 20 to ...
A la(s) ... menos cuarto	At quarter to ...
A la(s) ... menos diez	At 10 to ...
A la(s) ... menos cinco	At 5 to ...

Preguntas	
¿Qué fecha es hoy?	What is the date today?
¿Qué estudias?	What do you study?
¿Qué asignaturas te gustan?	What subjects do you like?
¿Cuándo tienes español?	When do you have Spanish?

# IT



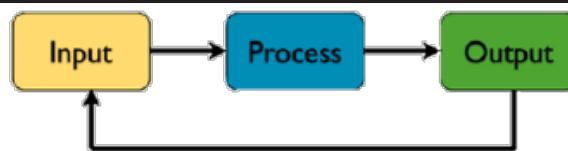


# IT - Understanding Computers - PartA



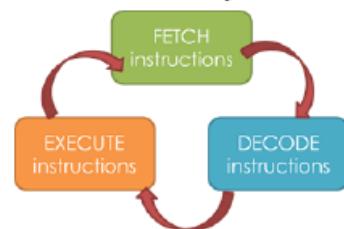
## What is a computer?

A computer is any device that takes an input, processes it and then outputs information



## Fetch, Decode, Execute

The main function of the CPU is to run an endless fetch-execute cycle.



The speed of the FDE cycle is measured in cycles per second (**hertz**). This is known as the **clock speed**.

Processors are usually measured in **giga-hertz (GHz)**

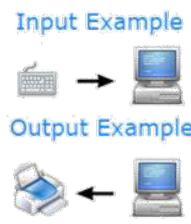
**1GHz** = 1 billion instructions processed.

## Input Devices

An input device is a piece of hardware that can be used to enter data into a computer

## Output Devices

An output device is a piece of hardware that can be used to represent information in a variety of ways



## What is Binary?

**Binary is a number system that only uses two digits: 1 and 0.** All information that is processed by a computer is in the form of a sequence of 1s and 0s. Therefore, all data that we want a computer to process needs to be converted into binary.

128	64	32	16	8	4	2	1
0	0	1	1	0	1	0	1

Decimal	Binary
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001

128	64	32	16	8	4	2	1
1	1	0	1	1	1	0	1

Decimal	Binary
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001

128	64	32	16	8	4	2	1
1	0	1	0	0	0	1	1

Decimal	Binary
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001

There are only 10 types of people in the world:  
Those who understand binary  
and those who don't.

## Components

Computer components are all the different internal parts of a computer system that help it to operate. Each component has its own purpose and functions.

### Central Processing Unit

The CPU is the brain of the computer. It does all the processing and calculating for the computer.



### Heat sink

A heat sink is used to draw heat away from important components such as the CPU that can get quite hot. If a component gets too hot then it will not be able to perform its job as well.



### Motherboard

The motherboard is what connects all the other components. It helps keep them secure and allows the components to communicate.



### Power Supply

A power supply helps to convert electricity to a suitable voltage to power the computer safely.



### Hard Drive

A Hard Drive is where all the computers long term data is stored i.e. data you want to keep for in the future, such as your own documents, music, films and games.



### Random Access Memory

RAM is where temporary data is stored while the computer is currently being used. Once a computer is switched off this data is lost.



### Network Interface Card

A network interface card (NIC) enables a computer system to connect to a network. Some allow access wirelessly.



# Art



# ART - Tone / Form



**Mark making describes the different lines, dots, marks, patterns, and textures we create in an artwork. It can be loose and gestural or controlled and neat.**

## Deliberate Practise

- Create your own dictionary of marks using a wide variety of materials and techniques.
- Van Gogh uses a technique called Impasto, what is this?



**A line in art is defined as a point moving in space, and it's one of the seven elements of art (line, color, shape, form, texture, value, space). It is one of the most crucial elements, as everything begins with just a simple dot in space, that transforms into lines and then drawings.**

## Key Vocabulary

Dots, Dashes, Line, Communication, Tribe Narrative, curve, gestural, Impasto

**Careers Link:**  
What is Graphic design and what does a Graphic designer do?

## Cave Art:

Watch the video link below

<https://youtu.be/ZjejoT1gFOc>

- Answer the question sheet about cave art.
- What is a stencil?
- How can you make a stencil?

# Design Technology



# Design & Technology - Control



## Different Types of Sensors



## YEAR 7 D&T CONTROL



## Machines & Tools



File



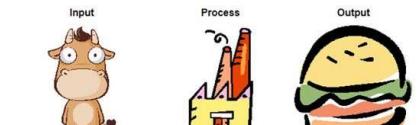
Safety Glasses

## Input>process>output

Every system has:

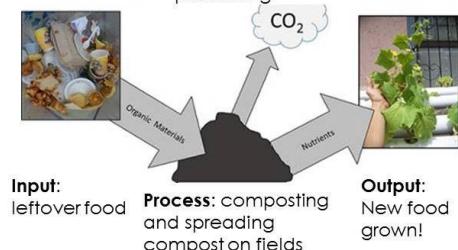
For example...

**Input**  
(ingredients that are put into the system)



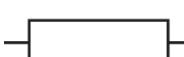
**Process**  
(what happens to make the system work)

**Input:** cow enters processing factory  
**Process:** slaughter, butchery, meat processing.  
**Output:** Burger to eat!

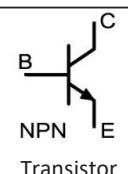


**Output**  
(what the system creates)

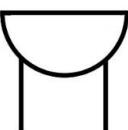
## COMPONENTS & SYMBOLS



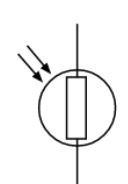
Resistor



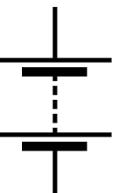
NPN  
Transistor



Buzzer



LDR



Battery



BC548 pinout  
1. Collector  
2. Base  
3. Emitter

# Design & Technology - Resistant Materials



## 1. Woods

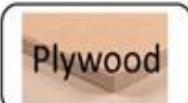
### Man-Made Woods



Has a smooth even surface & easily machined and painted. Available in water and fire resistant form. Can veneer or paint to improve appearance. Used for cheap furniture



Made from chips of wood glued together with urea formaldehyde. Usually veneered with an attractive hardwood or plastic laminate. Used for kitchen & bedroom furniture



A very strong board constructed using layers of veneer glued together with the grains at 90 degrees to each other. Interior and exterior grades available. Used for furniture, boats



A very cheap particle board. Can have a laminated plastic surface. Used for kitchen units and furniture back panels

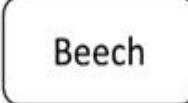
### Hard Woods



A very strong light brown wood. Open grained. Very hard but quite easy to work with. Used for quality furniture, beams and veneer



Reddish brown in colour. Easy to work with. Used for indoor furniture, bars and veneers



Has a straight grain & light in colour. Very hard but easy to work with. Can be steam bent. Used for toys, door handles etc



Open grain & easy to work with. Pale in colour and often stained black. Can be laminated, by splitting into veneers and gluing together

### Soft Wood



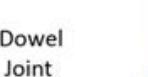
Pale yellow colour with dark grain lines. Medium weight, stiff and stable. Inexpensive. Used for DIY & constructional joinery. Also for furniture

## 1: Joining Methods

Wood joints can be either permanent or temporary depending on the type and if glue is used.

Permanent:	Temporary:
When we do not want to take the pieces apart again	When we will, or might need to take pieces apart again
Glues, welding, rivets	Screws, bolts, nails

### 1.1 Wood Joints



### Natural Timbers



### Softwood



Hardwoods are usually obtained from **deciduous** trees, which lose their leaves in autumn.

- usually grow in warmer more humid climates, mainly in South America and Asia
- grow slowly (80+ years)
- are more difficult to sustain than softwoods
- are more expensive than softwoods
- are strong and hardwearing.

Softwoods are usually obtained from **coniferous** trees, which keep their leaves in winter and are also known as evergreens. These grow quickly which makes them sustainable as they are renewable. This also makes them cheaper when compared to hardwoods.

- usually grow in colder climates and are mainly grown in Scandinavia and Northern Europe
- Grow thin, needle-like leaves
- Grow relatively quickly (30 years)
- Are easier to sustain than hardwood trees
- Are easy to cut and shape
- Are usually cheaper than hardwoods

## 3. Adhesives

**P.V.A.** – Poly Vinyl Acetate – best for joining 2 pieces of wood together

**Epoxy** – a *thermosetting* resin that can be used to bond most types of material

**Contact Adhesive** – a glue type that creates a tacky bond on both surfaces to be joined. It can be used with most materials.



### Manufactured Boards



Manufactured boards are made from the waste sections of felled trees – the parts which are of little use as planks. The wood is reduced to pulp, particles or thin strips and bonded together using special adhesives or resins. Manufactured boards are made as alternative to natural timber.

- Come in sheet form (usually 1.2 x 2.4m)
- Are extremely stable and of uniform thickness
- Are less expensive than laminating planks of timber
- Can be covered with veneers
- Are available in a variety of thicknesses (3, 6, 9, 12, 15, 18, 22mm)

# Food Technology



# Food and Nutrition



Cooking methods		Making techniques		Nutrients	
Simmering	A method of cooking in deep water just below boiling point- small bubbles	Rubbing in	A method used for making pastry/ cakes/ crumble where fat is rubbed into flour using finger tips	carbohydrates	Main source of energy for the body
Frying	Cooking method where food is cooked and browned in hot fat- amounts of fat vary.	Bridge and claw cutting technique	Arch hand to create a bridge when holding food and hold with a claw like grip	Vitamins/ minerals	Required in small amount to maintain good body health- each vitamin/ mineral does a different job
Baking	Cooking food in an oven with dry heat	Folding	Gentle mixing of ingredients usually done with a plastic spatula	fats	Secondary source of energy but required as insulation for the body
Grilling	Method of cooking under intense heat which can be from the top or bottom	Mixing	The combining of ingredients	Fibre	Vital for the body as it absorbs water and helps you go for a poo.
Boiling	Cooking in deep liquid at 100 degrees – large rapid bubbles	Forming/ shaping	Process of putting combined ingredients into a shape e.g. dough into a ball	Protein	Needed for growth and the building and repair of body cells.
Sauté	A method of cooking food by tossing it in fat	Chopping	To cut something into pieces	Dairy	Products made from milk (usually cows)- milk, yoghurt, cream and cheese.
<b>Food hygiene/ safety</b>		<b>Analysing foods</b>			
Food poisoning	Illness caused from eating contaminated foods	Flavour	The way in which food tastes		
Bacteria	Microscopic living organisms	Appearance	The way food looks		
High risk foods	Foods that provide the best conditions for the growth of bacteria	Texture	The way in which food feels like in the mouth e.g. crunchy, chewy, soft		

## Health safety and hygiene

- Wash hands before preparing any food, after handling raw meat, after sneezing/coughing and after going to the toilet.
- Cover cuts with a blue plaster
- Tie hair up
- Remove jewellery and nail varnish before handling food.
- If you are ill do not cook
- Wear a clean apron
- Never cook or prepare food unsupervised
- Use the 4c's cleaning, cooking, chilling and cross contamination.

## Good practise for washing and drying up.

- Use hot soapy water
- Use a dish cloth or washing up brush
- Rinse off bubbles
- Leave to drain
- Dry with a clean dry tea towel
- Check- make sure all food has been removed; ensure it is completely dry on top, bottom and inside.
- Ask teacher to check equipment before putting away.
- Empty bowl- rinse to remove bubbles.
- Use finders to unblock any food from plughole.
- Use a dishcloth to clean sink, bowl, area around sink and work area.
- Leave completely dry.

## Bridge and claw method of cutting:



# Music





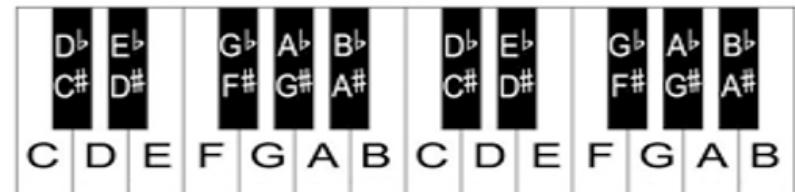
# Music - Major and Minor Scales



21

## TONES AND SEMITONES

TONE = 1 step    SEMITONE = 2 steps



C major

A minor

For a minor scale sharpen the seventh note

22

# Drama





# Drama - Pantomine



## Y7 Drama – HT3 – Knowledge Organiser

### **Key Techniques:**

**Story telling:** the social and cultural activity of sharing stories, sometimes with improvisation, theatrics or embellishment. Crucial elements of stories and storytelling include plot, characters and narrative point of view

**Thought-Tracking:** when a character speaks their thoughts aloud to the audience (no other character on stage can hear this.)

**Choral Speaking:** ensemble speaking by a group often using various voice combinations and contrasts to bring out the meaning or tonal beauty of a passage of poetry or prose.

### **Key Vocabulary:**

**Physical Theatre:** Using your body to tell a story rather than words/ Creating objects on stage using your body

**Vocal Projection:** the volume of your voice

**Vocal Tone:** The 'colour' or emotion of your voice

**Blocking:** The decisions made by actors/ directors about where actors should stand on stage and how they should move/ act.

**Levels:** Heights used by actors on stage to create interest for the audience.

**Symbolism**

**Themes:** big ideas that are presented within a story/ play

**Non-naturalism:** techniques used in Drama that are unrealistic.

E.g. still image/ mime/ thought-tracking

**Fable:** a short tale to teach a **moral** lesson, often with animals or legendary creatures

**Allegory:** a story, poem, or picture that can be interpreted to reveal a hidden meaning, typically a **moral** or political one.

**Narration:** a spoken commentary to the audience about the play

**Sustain Character:** the ability to stay in character (no corpsing)

### **Beowulf Plot:**

Beowulf, the narrator of his own story, goes back to a time long ago, before he was king, when he set out on a journey to the Northlands to help a people he had heard were in grave trouble. He and his band of warriors arrive in the land of the Danes, ruled over by King Hrothgar. First met with suspicion, they are finally welcomed into Heorot; a great hall which has been built, according to tradition, to house the treasures from the Danes' victories and celebrate the heroism of Hrothgar's warriors. However, for twelve years Heorot has been under siege from a terrifying monster, Grendel. Each night Grendel steals into the great hall and takes someone while they sleep.

When Beowulf and his warriors arrive to offer their services to the Danes, they find Hrothgar a shell of a king.

Beowulf pledges to help them overcome the despair and fear they feel, and to fight for them to defeat the monster. One of the Danes, Unferth, casts doubt on whether Beowulf can do it. She has heard the tales of his heroism, but doesn't believe he will save them. She questions why would he succeed, when their finest warriors have failed? Beowulf listens to what Unferth has to say and asks for one night to prove himself.

When night comes, Grendel arrives at the great hall. Beowulf is terrified as he witnesses the full horror of the monster devouring two sleeping warriors. Drawing on all his strength, Beowulf attacks Grendel and they become locked in battle. The monster has him in a terrifying grip and Beowulf feels himself coming close to death when Unferth comes to his aide, and Grendel, turning attention onto her, loosens its hold on Beowulf.

Taking his chance, Beowulf rips the monster's arm out of its socket and Grendel runs from Heorot in agony, towards the swamp that is its home, carrying Unferth with it. Beowulf follows in pursuit. Arriving at the side of a lake, Beowulf finds Unferth dying. Unferth gives Beowulf the dagger she dreamt would kill Grendel. He takes it and dives into the lake to find the monster.

At the bottom of the lake, Beowulf finds Grendel. The monster is in a cave filled with the armour and remains of the Danes it has dragged there. Grendel is still alive, but badly wounded. Beowulf takes out the dagger and plunges it into the monster's heart.

At this moment, a figure appears; it is Grendel's mother. The monster's mother speaks to Beowulf, offering a pact that would end the violence. In that moment Beowulf has a choice to make: to finish the cycle of violence with Grendel's death and make peace, or to carry through and destroy the monster's mother as well. Beowulf acts decisively, as a warrior hero, and kills the monster's mother with one blow.

Beowulf returns to the great hall victorious and is honoured with gold by the Danes. When he returns home to Geatland he is eventually made king. Fifty years pass and then a dragon comes. This is the dragon that will kill Beowulf. In his last moments, as he faces the dragon, Beowulf thinks about the choice that Grendel's mother gave him and what kind of king he was.

### **Beowulf Characters:**

**Hrothgar:** is the King of the Danes.

**Heorot:** not a person but the place at the heart of the story. It is the great wooden mead hall that King Hrothgar has had built and where the whole settlement gathers to feast and celebrate.

**Grendel:** a creature who lives in the marshland. He creeps into Heorot like 'a loathsome shadow' and brings terror to Hrothgar and his people.

**Beowulf:** a warrior who arrives at Heorot with his band of warriors. He has been sent by his king, King Hygelac to help Hrothgar and his people defeat Grendel.

**The Warriors:** King Hrothgar's Warriors who are loyal, fearless and brave. They have sworn allegiance to Hrothgar, to each other and to all their kith and kin.