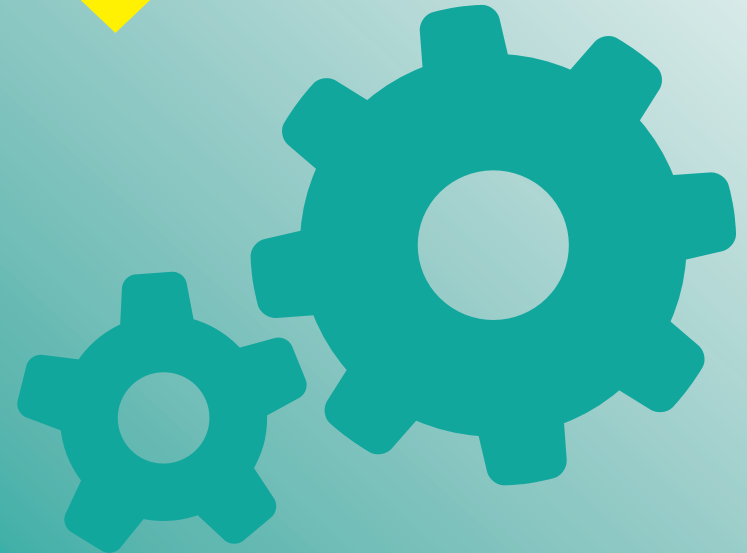


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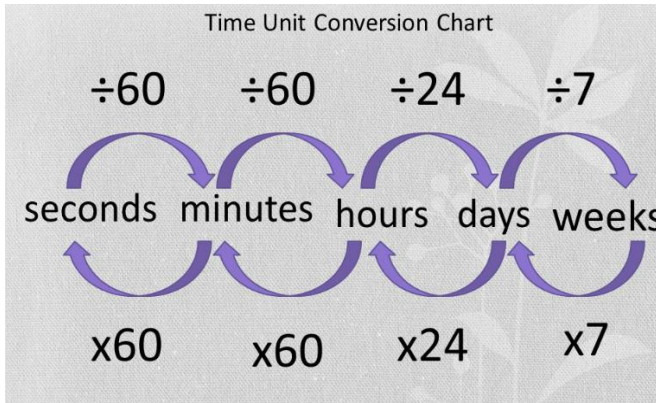
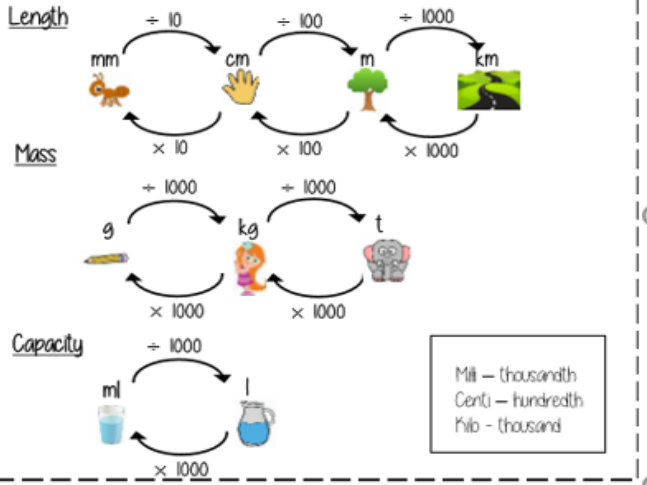


Maths

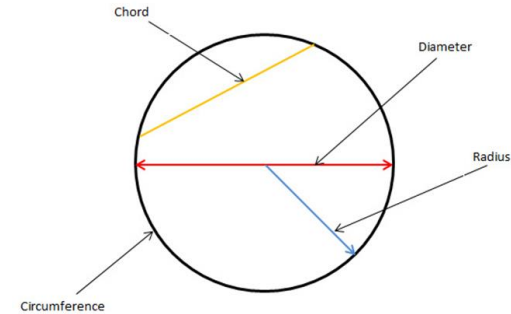




Metric conversions



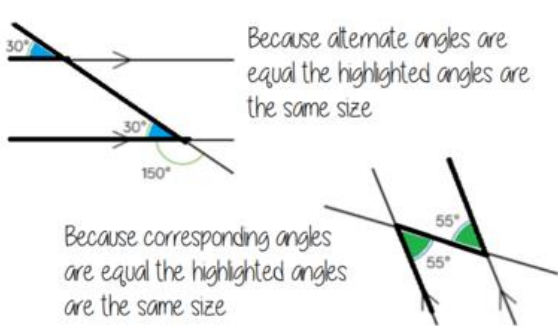
Parts of a circle



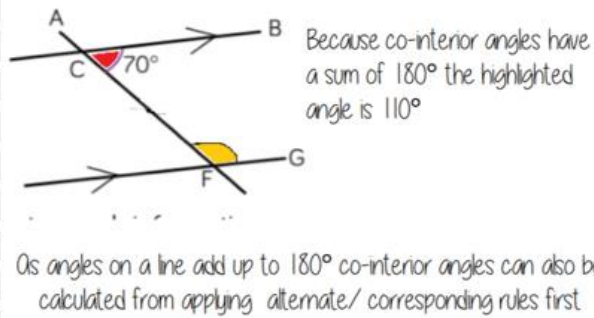
Circumference of a circle = πd
Where d is the diameter of the circle

Angles in parallel lines

Alternate/ Corresponding angles



Co-interior angles

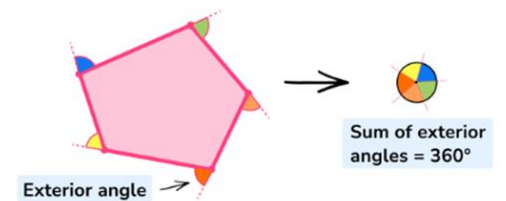


Angles in a polygon

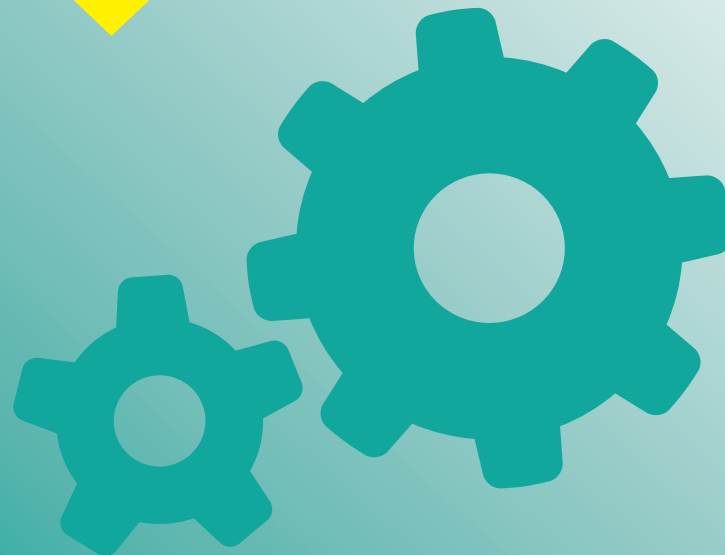
If the polygon has n sides, there will be $(n - 2)$ triangles inside.

Angle sum = $(n - 2) \times 180$

Sum of Exterior Angles of a Polygon = 360°

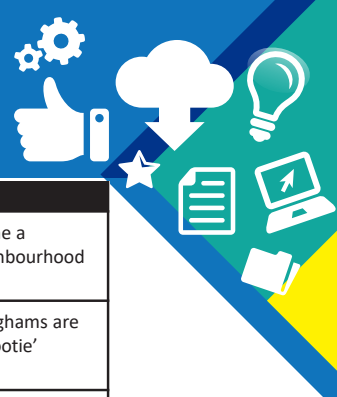


English





Year 8 HT3 - <i>To Kill a Mockingbird</i>	Context	Key Terminology
<p>Harper Lee was born in Monroeville, Alabama, in 1926. Like Jem and Scout, her father was a lawyer. She studied at the University of Alabama and worked in New York. There she began work on <i>To Kill a Mockingbird</i>, in the mid 1950s. It was completed in 1957 and published in 1960 - just before the black civil rights movement in America really took.</p>		<p>Exposition: a full-fledged and detailed explanation</p>
<p>The Wall Street Crash and the Great Depression in America: When the Wall Street stock market crashed in October 1929, the world economy was plunged into the Great Depression. By the winter of 1932, America was in the depths of the greatest <i>economic depression</i> in its history. The number of unemployed people reached upwards of 13 million. Many people lived in deprived conditions close to famine and many had to move to shacks.</p>		<p>Gothic: related to medieval style or the horror and mystery depicted in fiction about the 18th and 19th centuries</p>
<p>American Slavery: Black people were originally brought from Africa to America during the 17th, 18th and 19th centuries. They were forcibly transported across the Atlantic in slave ships (in which many died) and sold as slaves to work on sugar and cotton plantations in the Caribbean and the southern states of north America. They had no rights and were seen by their white owners as little more than animals or machines. Even after the abolition of slavery in 1865, the blacks were still almost powerless. The whites had too much to lose to allow black people any rights. Nothing was equal: black people had the worst of everything, while whites had the best.</p>		<p>Bildungsroman: a coming of age novel which focuses on the development of the protagonist from youth to adulthood</p>
<p>Segregation in 1930s America: In the 1930s, although 50% of the population of Southern towns were black, they had no vote and could not marry whites. The policy of segregation meant that black people had to have their own schools, their own churches, their own football teams, even their own cemeteries.</p>		<p>Didactic: intended to teach a message, particularly in moral instruction</p>
<p>The Scottsboro Case: In 1931, nine young black men were accused of raping two white women on a train. After a series of bitter trials, four of the men were sentenced to long prison sentences - even though prominent lawyers argued that the accusations were false. It was later discovered that the women were lying.</p>		<p>Jim Crow Laws: Racial segregation state and local laws</p>
		<p>American Dream: The ideal by which equality of opportunity is available to any American, allowing the highest aspirations and goals to be achieved</p>
		<p>Civil Rights: Rights that protect individuals' freedom from infringement by governments, social organizations, and private individuals</p>
		<p>Segregation: the action or state of setting someone or something apart from others</p>
Key themes		
<p>SOCIAL INEQUALITY: discrimination and racial prejudice run rife in Maycomb county, whilst only a couple of characters (such as Atticus) are committed to social equality. The social hierarchy perplexes the children who cannot fathom why everyone seems so keen to segment and despise each other. These social divisions are irrational and they can be particularly harmful and destructive to the community.</p>		
<p>MORAL EDUCATION: as a bildungsroman novel, the story tracks the moral development of Scout and Jem. Atticus is committed to ensuring that his children have a strong social conscience and acts as their moral compass throughout the novel. He teaches them to be kind to everyone and not to join in with the neighbourhood rumours and gossip mongering about Boo Radley. He also defends Tom Robinson, a black man, which many people in Maycomb found to be controversial, but Atticus just wants to do what is morally right and lead a good example for his children.</p>		
<p>GOOD AND EVIL: To begin with, Jem and Scout appear to assume that everyone around them is inherently good – they haven't really been exposed to evil – this is reflective of their young age and their sense of innocence in their attitudes to life. However, through events such as the rape case, the children develop a more adult perspective, understanding that evil has far reaching effects and can destroy good, innocent lives to great extents.</p>		
<p>PREJUDICE: Prejudice permeates Maycomb society. Almost every character is either prejudiced against others, or the victim of prejudice. There is racial prejudice, class prejudice and prejudice against individuals who don't fit in.</p>		



Plot

PART ONE Chapter 1: Scout Finch recounts the events that led to her brother Jem's broken arm many years earlier. She tells of how her father (Atticus) broke from the Finch's farming background to become a successful lawyer. Alongside Atticus, Scout also lives with her older brother Jem and their cook Calpurnia, Maycomb – a tired town in the grips of The Great Depression. A boy called Dill moved into the neighbourhood for the summer, who they befriended. Together, they all try to lure the mysterious Boo Radley out of his house. There are lots of rumours about Boo and his family.

Chapters 2-3: Scout goes to school for the first time, but does not get on well with her teacher, Miss Caroline. When Miss Caroline lends Walter money, Scout protests that she won't get it back (The Cunninghams are a poor family) Scout's hand is slapped with a ruler. To smooth things, Jem invites Walter over for dinner, where Calpurnia scolds Scout for being rude to Walter. Back at school, Miss Caroline cries when a 'cootie' crawls out of Burris Ewell's (a poor boy) hair.

Chapters 4-6: Scout continues to be frustrated by the slow curriculum at school. Scout & Jem find 'gifts' in knotholes in a Radley tree (chewing gum & pennies). Dill returns in summer Scout spends more time with a neighbour – Miss Maudie. She tells Scout that most of the rumours about Boo are untrue. Jem and Dill try to lure Boo out of the house. They see a shadow of a man and flee, with the sound of a shotgun behind them. Jem becomes stuck and has to shuffle out of his pants. The adults, hearing the noise, suggest Mr Radley has shot 'a Negro' in his yard.

Chapters 7-8: Scout also dislikes 2nd grade at school. Jem and Scout find other gifts at the Radley house – a ball of twine, two soap dolls resembling themselves, chewing gum, a spelling bee medal, and a pocket watch. Nathan Radley then fills the knothole with cement, he says because 'the tree is dying.' There is a snow day of school, and the children build a snowman of Mr Avery. Atticus is not happy and tells them to disguise it. Miss Maudie's house catches fire, and the neighbours wait outside. A blanket is draped over Scout – it is assumed it must have been Boo. :

Chapters 9-11: Atticus is asked to defend Tom Robinson, a black man, in a rape case. It is a case that he can never hope to win, but he does so for his own sense of morality and justice. Scout gets into a fight at school, and then with her cousin Francis, over them calling Atticus a 'nigger lover'. Chapter 10 tells the reader more about Atticus. He is older than most fathers in the town, and likes to read. However, when a mad dog comes into town one day, Atticus shows that he is a great shot with a rifle – shooting it dead from some distance. In C.11, an old lady called Mrs Dubose is offensive to the Finches about Atticus defending Tom, causing Jem to destroy her camellia bushes. She is a mad old lady, and so Atticus is mad. Jem is made to read to her once a day for a month. When she dies, she leaves Jem a camellia.

Part Two Chapters 12-13: To Scout's disappointment, Dill does not visit Maycomb in the summer, and Jem wants to be more apart from her. Calpurnia takes the children to her 'coloured' church, which is exceptionally poor, yet is collecting donations for the Robinson family. Aunt Alexandra stays for a while, becoming an integral part of Maycomb's social life. She believes that Atticus should teach the children about their ancestry and to be proud of the family name, but he fails in this.

Chapters 14-15: Alexandra tells Scout she cannot go back to the coloured church, and tries (unsuccessfully) to convince Atticus to get rid of Calpurnia. Jem and Scout are sent to bed for fighting, where they find Dill, who has run away from home. Atticus places himself in front of the Maycomb jail to prevent a lynch mob from getting to Tom. Scout and Jem jump out and Scout speaks to Mr Cunningham, who is in the mob, about his son. Ashamed, Mr Cunningham gets the mob to leave. Mr Underwood then reveals that he had Atticus 'covered' the whole time with a shotgun at a window. Then he straightened up and waved a big paw.

Chapters 16-17: The trial begins. People attend from all over, including Mr Dolphus Raymond, a wealthy man who has a relationship with a black woman. Jem, Scout, and Dill sneak into the courthouse and sit on the balcony. Heck Tate, the sheriff, is the first to be cross-examined. He found Mayella Ewell badly beaten, and Bob told him she was raped by Tom Robinson. No doctor was called, and the bruises were on the right hand side of her face. Bob Ewell is then called to the stand. He states that he saw Tom raping his daughter. Atticus questions why no doctor was called (too expensive and 'no need') and confirms Bob is left-handed (a left-hander would normally bruise the right of someone's face).

Chapters 18-19: Mayella is called to testify. She states that she called Tom into the house to break up a dresser, but that once in he took advantage of her. To Atticus, she reveals that she has a drunken father, 7 unhelpful siblings, and no friends. He questions how Tom could have inflicted the bruises, when he has a useless left hand (injured in a childhood accident). She yells at the courtroom that they would be cowards not to convict Tom and refuses to be questioned anymore. Tom is then questioned. He declares that Mayella embraced him, at which point her father appeared at the window. Tom's boss (Link Deas, a white man) confirms Tom is a good man. Link is expelled from the courtroom. The prosecution accuses Tom of lying about everything, which causes Dill to cry. Scout leaves the courtroom with him.

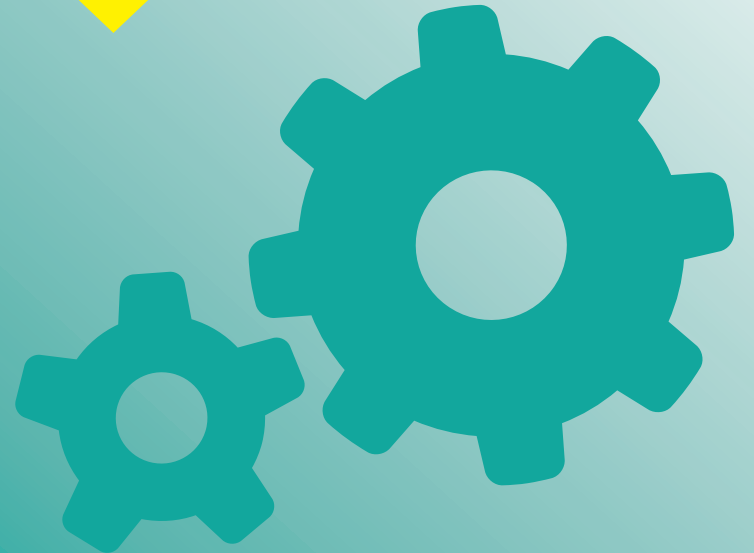
Chapters 20-22: They encounter Mr Dolphus Raymond. He explains that he pretends to be drunk to give an explanation for his lifestyle – he actually just prefers black people to whites. When they return to the courtroom, Atticus is making his closing comments –citing the prosecution's shaky evidence. Calpurnia comes into the courtroom and informs Atticus that the children have not been home – he sees them and sends them home for supper. The return after supper, and after a long delay, hear the jury return a guilty verdict. Jem is horrified by the guilty verdict, and no longer has faith in the people of Maycomb. The next day, the black population delivers an avalanche of food to the Finch household. The children then hear that Bob Ewell has spat at their father that morning, vowing to seek revenge.

Chapters 23-25: Bob Ewell's threats are worrisome to everyone except for Atticus himself. Atticus feels that Tom has a chance of acquittal, but if not he will be executed by electric chair. Atticus states that in an Alabama court, they were lucky to get the court to actually deliberate. Jem and Scout then discuss why everyone in town despises each other. One day in August, at Aunt Alexandra's missionary circle, Atticus reveals that Tom has attempted to escape and was shot dead. The missionary circle reconvenes as if nothing is wrong. Mr Underwood writes a long editorial condemning his death, but others think that it is typical for a black man to do something irrational like try to escape.

Chapters 26-27: School starts again, and the children pass by the Radley household each day, no longer scared, but still hoping to catch a glimpse of Boo. Teachings at school on the theme of equality frustrate Scout, as the same teachers have been known to be prejudiced against blacks in the town. After Bob Ewell loses a job, everyone connected with the case (Judge Taylor, Helen Robinson, Link Deas) begins to be harassed in some way – e.g. by being followed or seeing shadows lurking around their homes. On Halloween, Jem takes Scout to the school for a school event.

Chapters 28-31: On the way home from the Halloween event, the children are pursued by a mysterious assailant. Jem tries to protect Scout but is dragged away. Scout hears a crunching sound and Jem screams. As she runs towards him, she is seized. Then her attacker is pulled away. When the noise of the struggle has ceased, she sees a prone man lying in the street and a man carrying Jem back home. The Dr is called - Jem has a broken arm. Heck Tate appears and tells Atticus that the prone man is dead – it is Bob Ewell. As Scout explains what happened, she turns to the rescuer and realises it is Boo Radley. They listen to Heck and Atticus discussing what to do – although Heck knows that Boo killed Ewell, they agree that the story is Ewell fell on his own knife. Scout walks Boo home and then never sees him again.

Science

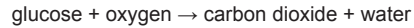




Types of respiration

All living cells **respire** to release energy. Organisms need energy for everything they do (for example, making new substances, moving).

Aerobic respiration is a series of **chemical reactions** that can be summarised as:

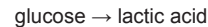


Energy is released (but is not a chemical substance and so is not shown in the word equation).

Carbon dioxide can be detected using:

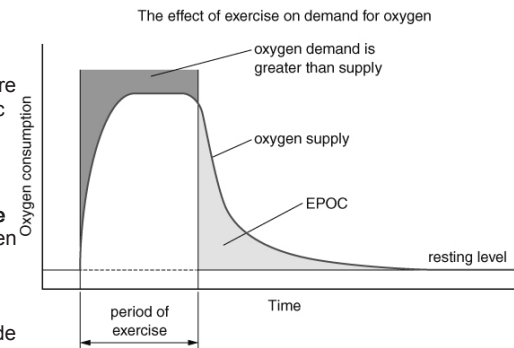
- **limewater** (which it turns cloudy)
- an **indicator** (such as hydrogen carbonate) because it is acidic.

Anaerobic respiration does not require oxygen. In humans it is used to release energy from glucose when more energy is needed than can be supplied by aerobic respiration (for example, during strenuous exercise).



Anaerobic respiration causes muscles to tire quickly and so cannot be used for extended periods. A lot of the lactic acid travels from the muscles to the liver, where it is converted back to glucose. Anaerobic respiration releases less energy than aerobic respiration.

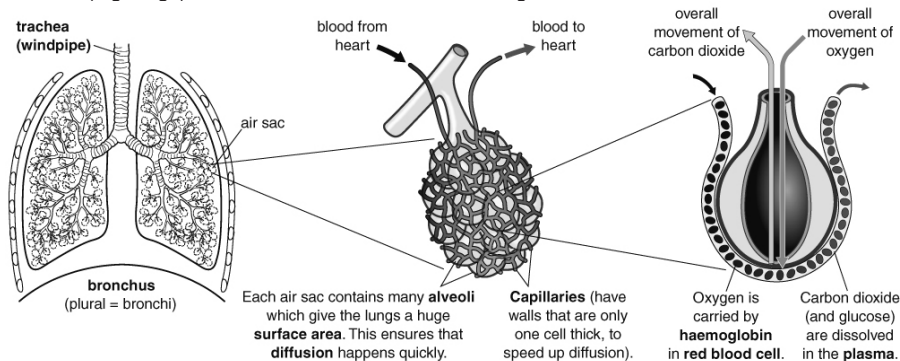
After strenuous exercise, the body needs extra oxygen. This **excess post-exercise oxygen consumption (EPOC)** (or 'oxygen debt') replaces oxygen lost from oxygen stores (in the blood and in muscles) and provides oxygen for increased levels of aerobic respiration (for example, to provide energy for removing lactic acid, for faster breathing, for faster heart rate).



Gas exchange

Different organisms use different organs for **gas exchange** (swapping one gas for another):

- **gills** (e.g. fish)
- **stomata** in leaves (plants)
- **skin** (e.g. frogs)
- **lungs**.

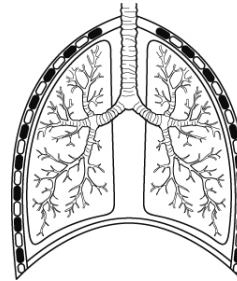
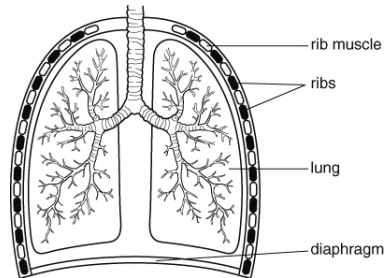




Ventilation and breathing

When you exercise, your **breathing rate** (number of breaths in one minute) and your **pulse rate** (number of times your heart beats in one minute) increase. This is because your cells need more oxygen and glucose for respiration.

Breathing is the movement of muscles in the **diaphragm** and attached to the ribs. These movements change the volume of the chest.



Breathing in (**inhalation**):

- Diaphragm contracts and moves downwards.
- Rib muscles contract and lift ribs up and outwards.
- Volume of the chest increases.
- Lungs expand.
- Pressure in lungs is reduced.
- Pressure outside is now higher than inside the lungs, so air flows into the lungs.

Breathing in (**exhalation**):

- Diaphragm relaxes and moves upwards.
- Rib muscles relax and move ribs down and inwards.
- Volume of the chest decreases.
- Lungs get smaller.
- Pressure in lungs is increased.
- Pressure inside the lungs is now higher than outside, so air flows out of the lungs.

Breathing **ventilates** the lungs. **Ventilation** is the movement of air into and out of the lungs.

Smoking

The chemicals in cigarette smoke are harmful.

Found in cigarette smoke:	Harm it causes:
nicotine	makes arteries narrower, causes heart disease
tar	can cause cancer, coats lungs reducing surface area, can cause alveoli to break apart (emphysema)
carbon monoxide	stops red blood cells carrying so much oxygen
high temperature of smoke	stops cilia working so lungs are not cleaned and mucus collects

Means, estimates and ranges

range = highest value – lowest value (with smaller ranges you can be more certain of your results)

$$\text{mean} = \frac{\text{total of all values}}{\text{number of values}}$$

Mean can be used to **estimate** a true value from repeated readings.



Light

Light travels in straight lines from a **source**. Light travels as **transverse** waves. It travels much faster than sound, and does not need a substance to travel through.

Light travels through **transparent** objects but not through **opaque** objects. **Shadows** are made when light is blocked by an object. Opaque objects block all light. **Translucent** objects allow some light to pass through, but it is scattered so you do not see a clear image.

Transmission and absorption

Transparent materials let light pass straight through. We say they **transmit** light. Opaque surfaces can **absorb** or **reflect** light. White surfaces reflect most of the light that hits them. Black surfaces absorb light very well and reflect very little. This is why they look so dark.

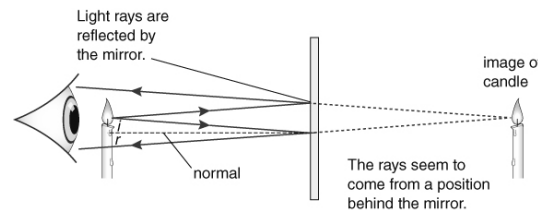
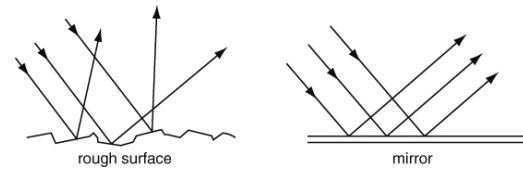
Reflection

Light rays are scattered by rough surfaces (**diffuse reflection**), which means that you cannot see an **image** in an object with a rough surface.

Mirrors and shiny materials such as polished metals reflect light evenly. This is called **specular reflection**. The **angle of incidence** (i) is equal to the **angle of reflection** (r) – this is known as the **law of reflection**. Angles are measured between the light rays and the **normal** (a line drawn at right angles to the reflecting surface).

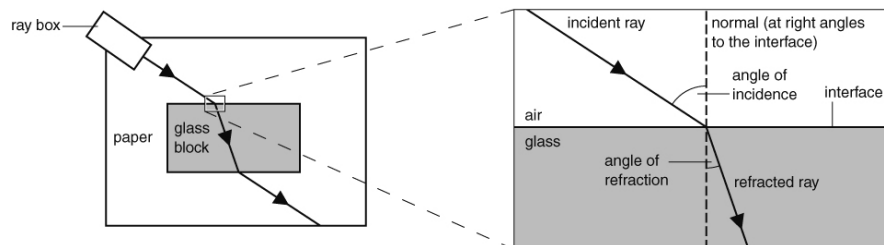
You can see an image in a mirror because the reflected rays of light appear to come from a point behind the mirror.

The image in a plane mirror is the same size as the object, and the same distance away from the mirror. In the image, left becomes right and right becomes left.



Refraction

When light hits something transparent it changes speed and direction. This is called **refraction**. Refraction takes place at the **interface** between two substances. When light is transmitted through glass it slows down and changes direction towards the **normal**. When it travels back out it speeds up again and changes direction away from the normal.

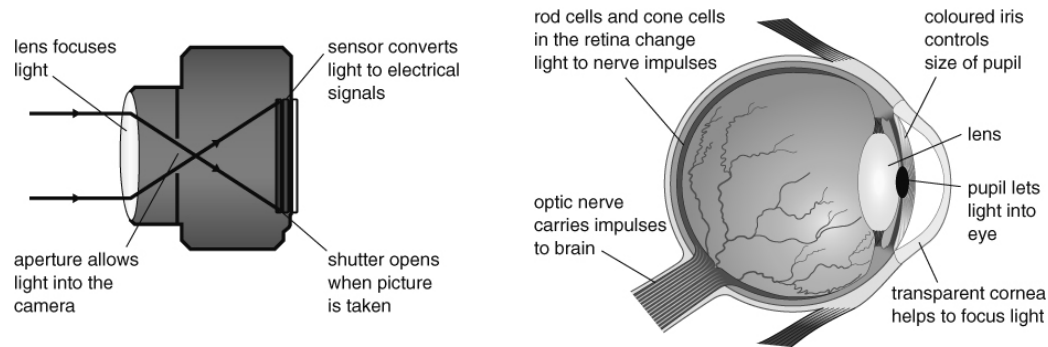




Lenses are curved pieces of glass or transparent plastic that are designed to refract light in particular ways. **Converging** lenses make rays of light come together. The **focal point** of a lens is the point where parallel rays of light are brought together by the lens, and the **focal length** is the distance of this point from the centre of the lens.

Lenses are used in cameras, microscopes and telescopes.

Cameras and eyes



Rod cells in our retinas detect faint light but not colours and cone cells detect the primary colours of red, blue and green. We see combinations of primary colours as secondary colours (magenta, cyan and yellow).

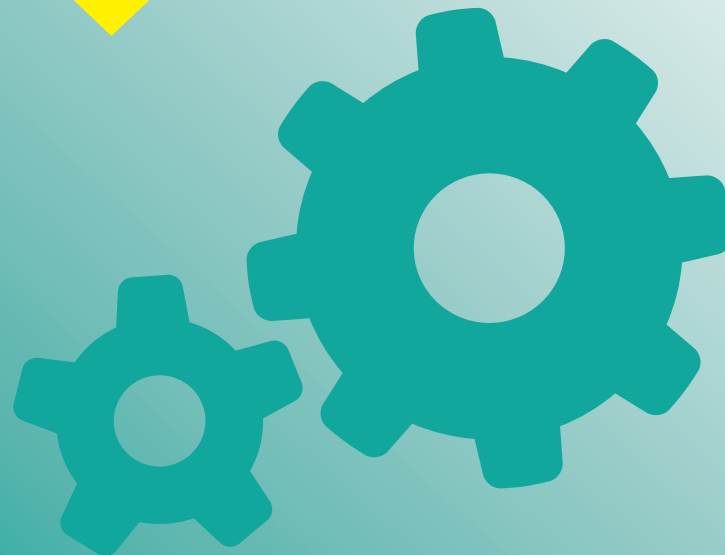
Colour

White light is a mixture of colours. White light can be split up using a **prism** to give a **spectrum** of seven colours (red, orange, yellow, green, blue, indigo, violet). The splitting of colour into a spectrum is called **dispersion**.

We are able to see colours because objects do not reflect all the colours in light. White objects reflect all the colours, but a red object only reflects red and all other colours are absorbed. This idea applies to all colours except black – black objects absorb all colours.

Filters are used to make coloured light. They transmit one of the colours in white light and let the other colours through. If you look at a coloured object in coloured light, its colour may appear to be different.

History





THE ATLANTIC SLAVE TRADE KNOWLEDGE ORGANISER

Summary

The **Transatlantic Slave Trade** involved the enforced enslavement of millions of Africans and their transport to the Americas.

Slaves were often made to work in **inhumane conditions with no wages**. Many were beaten or killed by brutal owners, and had no rights in their new countries. Many didn't survive **the journey**.

The trade had its roots as early as the 1500s, but was **at its height in the 18th Century**, under the operation of the imperial European nations (e.g. Britain, Portugal and Spain).

Countless **African communities were decimated**, whilst many European nations became extremely wealthy from the profits of the slave trade.



*Slaves recaptured and brought back to Africa
Boundaries as of 1750 shown

Features of the Slave Trade

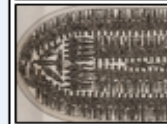
THE TRIANGULAR TRADE



The trade in slaves was called the triangular trade, because it had trade in three stages, marking a rough triangle between Europe, Africa and the Americas:

1. Manufactured goods from Europe, e.g. textiles and weapons, were taken to Africa where they were exchanged for slaves;
2. The transport of slaves from Africa to the Americas was known as the 'Middle Passage.'
3. Materials produced as a result of slave **labour** in the Americas, e.g. sugar, cotton were brought back to Europe.

SLAVE SHIP CONDITIONS



- Enslaved people were captured in many different ways, including in battles, raids and kidnappings.
- Others were sold into slavery in order to pay debts.
- Once captured, slaves were often shackled together and made to walk to the coast in journeys that could last months, where they would be put aboard slave ships.
- Slave ships were deliberately designed to fit as many slaves on board as possible (see bottom image on left).
- Conditions were truly inhuman. Men, women and children were crammed on board with very little food or hygiene facilities. The average time to sail the Atlantic took 60-90 days, during which many died of illness, disease, hunger or injury. Of 12.5 million sent by slave ships between 1526 and 1867, only about 10.7 million arrived.

PLANTATIONS



- Upon arrival, most slaves were placed into forts owned by Europeans, where they could be bought by owners.
- Many went to work in plantations, where conditions were exceptionally harsh. Slaves worked from dawn until dusk, with very little food, and were whipped for lack of effort.
- Slaves who disobeyed even in small ways were severely punished. In some countries slaves could be killed legally.
- Runaways could be hanged or maimed, whilst they could receive a set number of lashes for particular 'crimes.'

Key Vocabulary

- Atlantic
- Slave Trade
- Africa
- Europeans
- Americas
- Slavery
- Plantations
- Culture
- Triangular Trade
- Slaver
- Caribbean

Major Events

Pre-European Involvement



- Prior to Europeans arriving in Africa, a slave trade within Africa was already established, particularly in west Africa. Kingdoms often enslaved members of neighbouring communities.
- Early explorers from Spain and Portugal kidnapped Africans to be used as slaves in Europe and on their Atlantic islands. Tribe and kingdom leaders in west Africa were often complicit with the trading.

Tacky's Rebellion (1760)



- Tacky's** rebellion was an uprising of slaves on the Caribbean island of Jamaica from May to July of 1760. Tacky had previously been a king of an African village. He planned to overthrow the slavers and create his own nation. Whilst the rebellion had considerable success early on, militia were put in place to bring the rebellion down. Tacky was killed and his followers committed suicide.

The Zong Massacre (1781)



- The slave ship Zong was carrying 470 enslaved people – more than it could handle. Many began to get sick.
- The sickness was spreading to the crew. So, to save themselves, the remaining crew threw 132 sick or dying people into the ocean. Another 10 jumped in with them. No one was ever charged with murder.

Haitian Revolution (1791-1804)



- The Haitian Revolution was a slave revolt against French colonial rule in Haiti.
- One of the leaders of the uprising was former slave Toussaint L'Ouverture.
- in 1804: the only slave uprising that led to the foundation of a state that was free from slavery and ruled by non-whites.

The Fall of the Atlantic Slave Trade

- Throughout the 18th Century, opposition began to gather against the slave trade in Britain, America and parts of Europe.

- The Committee for the Abolition of the Slave trade was led by William Wilberforce, Granville Sharp and Thomas Clarkson. Whilst Britain became a leading force in abolishing slave trade, it cannot be forgotten that Britain had been one of the most active slave-trading nations of all.

- Denmark was the first country to ban the slave trade, in 1792, which took effect in 1803. Britain banned the slave trade in 1807. Slavery to the Spanish colonies continued until much later in the 19th Century.

Top 10 Facts!

1. The first country to ban the slave trade was Denmark, in 1792.
2. In the 18th Century, Britain was responsible for 2.5 million of the 6 million slaves transported.
3. Of the 3 million slaves that British slave traders bought or sold, around 300,000 did not survive the journey across the Atlantic.
4. The life expectancy for slaves living in Brazil was only around 23 years.
5. The five countries most active in slave trading were Portugal, UK, France, Netherlands & Spain.
6. The destination for most slaves was not actually the USA. Around 48% were sent to the Caribbean and 41% to Brazil.
7. Many slaves were expected to work for 48 hours at a time during harvest.
8. The last known Atlantic slave ship, carrying captives to Cuba, travelled in 1866.
9. A lady called Harriet Tubman is thought to have liberated over 300 slaves.
10. In total, the Atlantic Slave Trade lasted around four and a half centuries.



History Knowledge Organiser: Slavery and Civil Rights

1619 – First slaves arrive in Virginia 1619	1700	1793 – Fugitive Slave Law ensures escaped slaves are returned to owner	1800	1807 – Parliament pass the Slavery Act	1861-1865 - American Civil War	1865 – KKK founded 1900	1963 – MLK: I Have a Dream speech	2018
		1793 – Eli Whitney's invention of the Cotton Gin increases demand for slaves		1833 - Parliament pass the Slavery Abolition Act	1863 – Abraham Lincoln issues the Emancipation Proclamation	Late 1800s – Jim Crow Laws	1957 – Montgomery Bus Boycott And Little Rock	2008 – Barack Obama becomes president

Capture

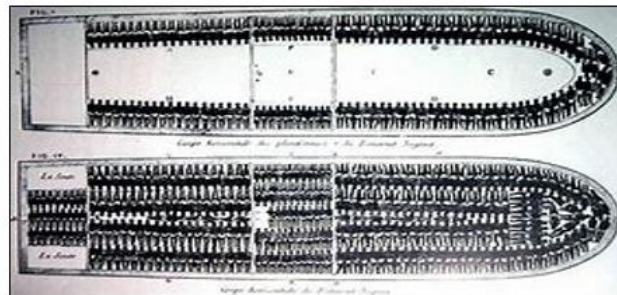
Greater Pillage– Chaos was created within a tribe's camp, usually by setting fire to it. As the tribespeople fled, they would be captured by men waiting in the surrounding forest.

Lesser Pillage– This method was usually reserved for men who were left camp to hunt. They would be captured after they left the camp, often tempted by squares of linen left out to entice them.

Kidnap– Generally done close to the shore by the crew members of the ship. Tribespeople would be captured and taken straight to the ship.

Middle Passage – Slave ships took between six to eleven weeks to cross the Atlantic. They were packed into ships in the model shown below – the Brooke's Slave Ship model.

The conditions were terrible and around 15% of slaves died on the journey. They were often packed three high and shackled together throughout the duration.



Auction – Slave traders wanted to present their slaves in the best possible condition. They would cover their bodies in tar to hide any sores from the middle passage. Anybody left over was sold by scramble auction. A set price was agreed and then potential owners would rush in and try to grab the best slaves from the centre of the room.

Plantations – Life on a plantation was difficult for slaves. Most worked harvesting crops. Some would work as servants in the house.

In 1793, Eli Whitney invented the Cotton Gin which increased the demand for cotton and meant that slaves were worked even harder to pick more cotton. Punishments became more harsh as plantation owners pushed slaves to work faster.



Emancipation & Abolition –

England abolished slavery in 1833 but America didn't until Abraham Lincoln issued the Emancipation Proclamation in the Civil War.

Segregation – After slavery was ended in America, black and white people were separated. Share cropping was introduced where ex-slaves had to rent land from their previous plantation owners. This often meant that the ex-slaves couldn't afford a home, food, and the materials needed to farm. For many of them, they were worse off than when they were slaves. Jim Crow Laws were introduced in the late 1800s to promote 'separate but equal' lives for black & white people.

KEY EVENTS:

The Bus Boycott: 1957 – In Montgomery, Alabama, black people were told to sit at the back of a bus. Rosa Parks, working for the NAACP, refused to give up her seat for a white person. She was arrested and a boycott of the buses lasted for almost a year.

Little Rock: 1957 – The Little Rock Nine were the first nine students in Arkansas who attempted to integrate into Little Rock High. The community violently protested their integration.

Martin Luther King: 1963 – MLK gave his 'I have a dream' speech, where he told the world that he wanted a future with equal opportunities and without racism.

Barack Obama: 2008 – Obama became the first African American president and told the world "yes we can".

Key Words

Trade: The swapping of goods in exchange for something different.

Pillage: The act of theft, usually involving violence.

Chief: The person in charge of the African tribe.

Middle Passage: The travel completed between Africa and the Caribbean. Conditions were very poor.

Merchant: Someone involved in trading.

Plantation: The places slaves were taken to work in America & the Caribbean.

Auction: Where slaves were sold to the highest bidder.

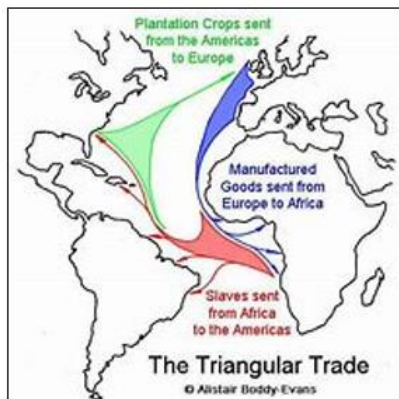
Resistance: When slaves tried to fight back; sometimes actively, sometimes passively.

Abolition: The ending of the Slave Trade.

Civil Rights: The movement to try to ensure that everyone, regardless of skin colour, has equal rights.

Segregation: Separation of black & white people.

Constitution: The original 'rule book' of America, created by the Founding Fathers in 1787.





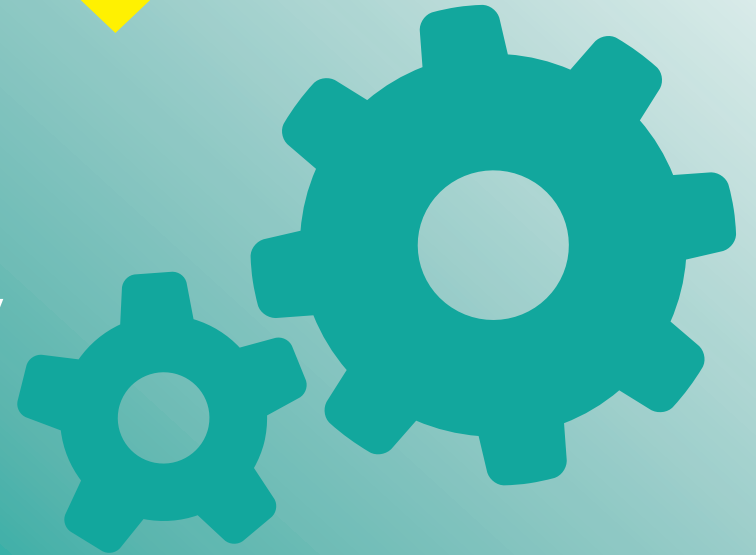
Research:

Research the role that Liverpool played in Triangular Trade

What was the Amistad?

Who were the Abolitionists?

Geography





KEY WORDS:

- Biome
- Desert
- Physical Geography
- Grassland
- Forests
- Conflict
- Tourism
- Region
- Arabian Peninsula
- Population density
- GDP

Once upon a time, the Middle East was part of the **Ottoman Empire**. This Islamic empire existed from around 1299 to about 1918 and from 1454 claimed Constantinople (Istanbul today) as its capital city. By 1914 the empire was declining, and had lost areas like Egypt in wars. In WW1 the empire fought against Britain, France and Russia. When they lost the war, the empire was divided up between Britain and France, which caused a lot of tension. The whole of the Middle East is now independent.

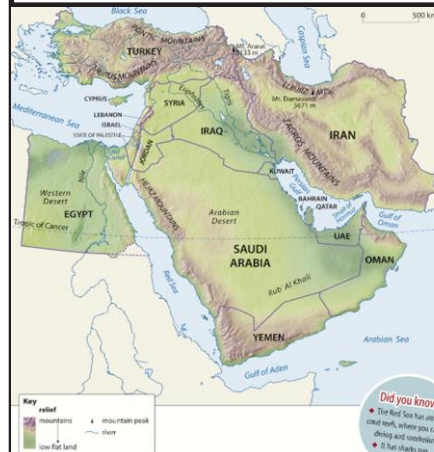


For many reasons some countries in the Middle East are richer than others. Those countries that have got oil have been able to become very wealthy. Other countries with poor natural resources are poorer. However the wealth in the rich countries is not always shared equally.

Country	GDP per person (PPP) in dollars, in 2013
Bahrain	43 900
Kuwait	83 800
Oman	45 300
Qatar	136 700
Saudi Arabia	53 600
UAE	59 800
Yemen	4000
UK	38 300

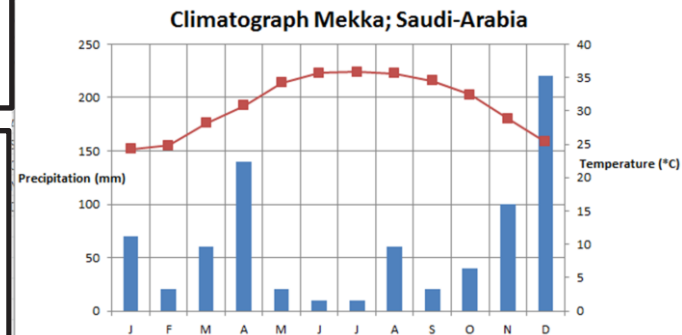
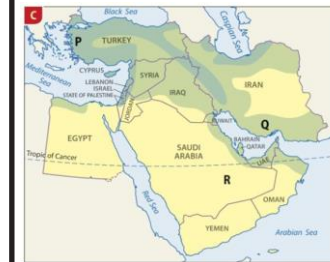
The Middle East is a **region** made up of a number of different countries. These countries all have different landscapes, languages, religions and customs

The **climate and the landscape** also has a big impact on **where people live in the Middle East**. Places where people can farm, get reliable water or other resources are the most densely populated. A **choropleth map** uses one colour to show the proportion of people living in one place.

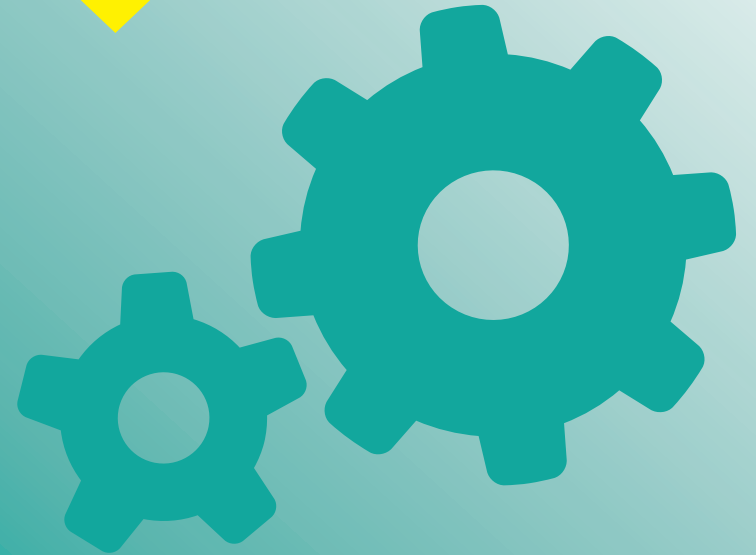


The **climate** of the Middle East is also varied and this is due to the landscape. Deserts are hot and dry, the mountains can be snow covered in winter.

The Middle East has a **varied landscape** made up of Mountains, deserts, marshlands and coastlines. The Arabian peninsular is largely made up of Desert, one part of this is called the Rub Al Khali or the Empty Quarter




Religious Studies











ISLAM KNOWLEDGE ORGANISER




Overview	
<p>Islam is one of the world's major religions. It is the world's 2nd largest religion, with about 1.8 billion followers.</p> <p>Muslims are the people who follow Islam. They believe in one God who created everything – he is called Allah (the Arabic name for 'God').</p> <p>Muslims believe in a messenger of Allah, named Muhammad. They view him as the final prophet, following Adam, Abraham, Moses, Jesus and others.</p> <p>Muhammad is believed to be the person who founded the faith of Islam, about 1,400 years ago.</p> <p>The holy book in Islam is called the Qur'an. A mosque is a building designed for Muslim worship.</p>	<p>Around 2.5 million Muslims each year take part in the annual 'hajj' pilgrimage to Mecca.</p> 

Answers to Important Questions and Key Vocabulary		
<p>Where do Muslims worship God?</p> 	<p>-Muslims pray in a building called a mosque. -The word for mosque in Arabic is 'masjid.' Most mosques have at least one dome, and many also have one or two towers. -Muslims take off their shoes before entering the mosque to pray. This is a sign of respect. -On Fridays at noon, the most important religious service of the week is held in the mosques.</p>	<p>Key Vocabulary</p> <p>Allah</p> <p>Muhammad</p> <p>Qur'an</p> <p>Five Pillars</p> <p>Ramadan</p> <p>Eid</p> <p>Mosque</p> <p>Prophet</p> <p>Hadith</p> <p>Sunni</p> <p>Shia</p> <p>Caliph</p>
<p>What is the Qur'an?</p> 	<p>The Qur'an is the holy book of Islam. Muslims believe that the Qur'an contains the holy words of God, which teaches them the right path. Other important books in Islam are the Sunnah (about Mohammad's life) and the Hadith (the words of Mohammad).</p>	
<p>Where do most Muslims live in the world?</p> 	<p>-There are about 50 countries around the world in which Islam is the largest religion. -The Arab world (the Middle East and Northern Africa) accounts for about 20% of all Muslims. -There are also millions of Muslims from Indonesia, Pakistan, Bangladesh and India. -China, Iran and Turkey also have many Muslims. -After Christianity, Islam is the 2nd largest religion in most European countries.</p>	
<p>How many different types of Muslims are there?</p> 	<p>-There are two main types of Muslims – Sunni Muslims and Shia Muslims. Although all Muslims follow the Qur'an and the five pillars of Islam, they also have some differences. Sunni Muslims believe that leadership of the community (and the 'caliph' – leader) should be elected from the community. Shia believe that leadership should stay within the prophet's family, or be chosen by Allah.</p>	

Muslim Beliefs	
<p>Laws and Customs</p>  <p>-There are many laws and customs outlined in the Qur'an, that Muslims should follow.</p> <p>-They must dress modestly, e.g. many Muslims wear long clothes that cover their bodies, and women wear a hijab which covers parts of their hair/face. Food must be halal, meaning animals must be killed in a certain way.</p>	<p>Ramadan</p>  <p>-Ramadan is the ninth month of the Islamic calendar. It is a month in which Muslims worldwide take part in fasting.</p> <p>-For the whole of the month, Muslims do not eat during daylight hours. Instead, they devote themselves to prayer and to Allah.</p>

The Five Pillars of Islam

-The Five Pillars of Islam are the behaviours and beliefs by which Muslims must live their lives. They were founded in the hadith of Gabriel.



1. Shahadah: the declaration of faith: 'There is no God but Allah, and Mohammad is his messenger.' 2. Salah: the five daily prayers. 3. Zakah: Giving money to help the poor. 4. Sawm: Committing to fasting during the month of Ramadan. 5. Hajj: A religious pilgrimage to Mecca that Muslims should undertake at least once in their lives.

Muhammad

- Muslims believe that God sent his final message to Earth through Muhammad, 1400 years ago. He is considered so holy that Muslims say 'peace be upon him' whenever they say or write his name.

-When he was around 40 years old, Muhammad is believed to have been approached in a cave by the angel Gabriel, who sent 'revelations' from Allah. He continued to receive these messages, and to teach them to others.

-The messages that Muhammad received were later collected and made into the Qur'an. Muslims believe that they should follow the example set by Muhammad throughout their own lives.

Top 10 Facts!	
1. Friday is the Muslim holy day. People go to the Mosque and pray.	6. Muslims believe that Allah told Muhammad exactly what to write in the Qur'an.
2. Islam is the fastest-growing religion in the world.	7. The Qur'an has a total of 144 chapters. Many Muslims try to memorise the entire Qur'an!
3. Muhammad was born in Mecca – which is now in Saudi Arabia. It is considered a holy place.	8. Muslims are called to prayer by a muezzin, a man who sings through a loudspeaker.
4. The very first mosque was in the courtyard of the home of the prophet Muhammad.	9. About 23% of the global population are Muslim.
5. The Ka'ba is an ancient shrine in Mecca that Muslims believe is the holiest place on earth.	10. The 'Islamic World' refers to the Middle East, North Africa, and parts of South East Asia.

Islam Timeline

Beginning of time: Allah creates the world and everything in it.	Around 570CE: Muhammad is born in Mecca.	c.610CE: Muhammad receives the first revelation from Gabriel.	c.622CE: Muhammad reaches Medina. Beginning of Islamic calendar.	c.630CE: Muhammad returns to Mecca. People accept Islam.	c.633CE: Muhammad dies. Abu-Bakr made caliph (leader).	c.655CE: Islam spreads from the Middle East through North Africa.	c.1120CE: Islam spreads to South-East Asia.	c.1979CE: Iranian Revolution forms state of Iran – first attempt at an Islamic state.
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✝ — R.E: CHRISTIANITY – THE BIBLE KNOWLEDGE ORGANISER — ✝

Overview

- The Bible is the holy book of Christianity. It is not written by one author, but rather is a collection of 66 different books within one volume.
- The Bible is divided into two parts: The Old Testament (which contains 39 books) and The New Testament (with 27 books).
- The Old Testament has the same content as the Jewish Tenakh. It mainly discusses creation and God's early relationship with the Jews.
- The New Testament mainly covers the life of Jesus, his followers, and early Christian communities.

The Importance of the Bible for Christians

Christians refer to the Bible as the word of God.

- Some take the words in the Bible as God's actual words, whilst others consider the Bible as the words of those inspired by God.
- Likewise, some Christians take every word in the Bible as though they are literally true, whilst others think that parts are figurative (not meant to be taken literally, but make a point). Whatever their outlook, all Christians agree that the Bible inspires and educates them in how they should live their lives.

- Key Vocabulary**
- Christianity
 - Bible
 - Jesus
 - Sacred
 - Testament
 - Gospels
 - Apostle
 - Literal
 - Figurative
 - Anglican
 - Catholic
 - Creation
 - Genesis

<p>Anglican Churches</p> <p>In Anglican Churches, the Bible is placed on a lectern. The lectern is often shaped like an eagle – just as eagle soars and inspires, the Bible inspires people as it is read from the lectern to those in the church.</p>	<p>Catholic Churches</p> <p>In Roman Catholic churches, the Bible is carried in procession (a ritual of a group of people moving forwards together) before it is read. This helps to show the respect that is held for the Bible and its words.</p>
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Content of the Bible

The Old Testament

-The Old Testament is made up of several sections:

- Law is the first five books (Genesis to Deuteronomy). These are not 'laws' in the modern sense, but stories and ideas about how life should be lived.
- History contains the books of Joshua to Esther. This has twelve books which look at the history of the land of Israel.
- Wisdom is the book of Jobs to the Song of Songs. The Wisdom section contains 'intelligent' ideas about how life should be lived.
- Prophets contains the books of Isaiah to Malakai, and contains information about inspired preachers and teachers of God.

The New Testament

- The New Testament contains the four gospels of Matthew, Mark, Luke & John. These contain the main records of the life & teachings of Jesus.
- The New Testament also contains that Acts of the Apostles, which were also written by Luke. This tells of how the actions of Jesus' followers after his death and resurrection led to the formation of the Christian Church.
- Finally, it contains the 21 Epistles (letters) written by Paul and the Book of Revelation, written by St. John the Divine. This discusses the end of the world.

The Creation Story

This is the sequence of events from the creation story at the beginning of Genesis 1:

First Day: God made day and night.

Second Day: God made the sky, oceans & land.

Third Day: God made all kinds of plants.

Fourth Day: God made the Sun and the Moon.

Fifth Day: God made water & sky creatures.

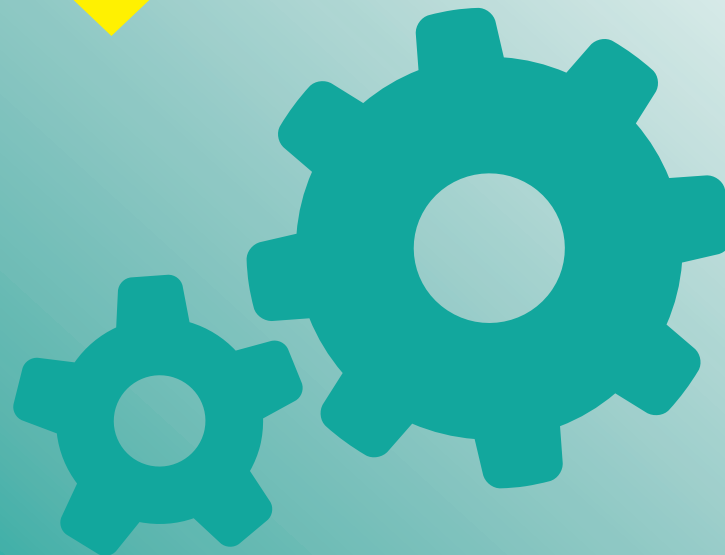
Sixth Day: God created the other animals. He made humans to rule over the Earth.

Seventh Day: God finished his work and rested. He blessed the Seventh Day as a special day.

Personal Spirituality – Key Questions

- | | | | | | | | | |
|--|--|---|---|--|--|--|--|---|
| What books and stories are important to you? | What lessons have you learnt from stories? | What books and stories are important in your communities? | What key events have happened in your life? | How would you like your life story to be told? | How can we contribute to our own life stories? | Can we interpret the same stories in different ways? | What are your favourite features of the natural world? | How does the natural world make you feel? |
|--|--|---|---|--|--|--|--|---|

Spanish





Las Vacaciones

¿Adónde fuiste de vacaciones? – Where did you go on holiday?

1. Vacaciones	1. Holidays
2. El año pasado	2. Last Year
3. El verano pasado	3. Last Summer
1. Fui A	1. I went TO
2. Fuimos A	2. We went TO
3. Viajé A	3. I travelled TO
4. Viajamos A	4. We travelled TO
5. España	5. Spain
6. Inglaterra	6. England
7. Gales	7. Wales
8. Escocia	8. Scotland
9. Alemania	9. Germany
10. Francia	10. France
11. Los Estados Unidos	11. The USA
12. Italia	12. Italy
13. Grecia	13. Greece
14. Turquía	14. Turkey

¿Con quién fuiste? – Who did you go with?

1. Fui CON	1. I went WITH
2. Fuimos CON	2. We went WITH
3. Mi familia	3. My family
4. Mis amigos	4. My friends
5. Mis padres	5. My parents
6. Mis hermanos	6. My siblings
7. Mi colegio	7. My school

¿Cómo viajaste? – How did you travel there?

1. Viajé EN	1. I travelled BY/ON
2. Viajamos EN	2. We travelled BY/ON
3. Fui EN	3. I went BY/ON
4. Fuimos EN	4. We went BY/ON
5. Avión	5. Plane
6. Coche	6. Car
7. Barco	7. Boat
8. Autobús	8. Bus
9. Autocar	9. coach

¿Dónde te quedaste? – Where did you stay

1. Me quedé EN	1. I stayed IN
2. Nos quedamos EN	2. We stayed IN
3. Me alojé EN	3. I stayed IN
4. Nos alojamos EN	4. We stayed IN
5. Un hotel	5. A hotel
6. Un apartamento	6. An apartment
7. Un albergue juvenil	7. A youth hostel
8. Una caravana	8. A caravan
9. La casa de mi abuela	9. My grandma's house

¿Qué hiciste durante tus vacaciones? – What did you do on holiday?

1. Durante mis vacaciones	1. Durante my holidays
2. Tomé el sol	2. I sunbathed
3. Compré regalos	3. I bought presents
4. Bailé	4. I danced
5. Fui de excursión	5. I went on a trip
6. Mandé mensajes	6. I sent messages
7. Jugué al voleibol	7. I played volleyball
8. Saqué fotos	8. I took photos
9. Monté en bicicleta	9. I rode a bike
10. Visité monumentos	10. I visited monuments
11. Descansé	11. I rested
12. Nadé en la piscina / el mar	12. I swam in the pool/sea

Sequences

1. El primer día	1. On the first day
2. Luego	2. Then
3. Mas tarde	3. Later on
4. Después	4. Afterwards
5. Entonces	5. So

¿Qué tiempo hizo? – What was the weather like?

1. hizo mucho sol	1. It was very sunny
2. hizo calor	2. It was hot
3. hizo viento	3. It was windy
4. hizo buen tiempo	4. It was good weather
5. Hizo mal tiempo	5. It was bad weather
6. hizo frio	6. It was cold
7. Llovió mucho	7. It rained a lot
8. Hubo tormenta	8. It was stormy

El Último Día

1. Por la mañana	1. In the morning
2. Por la tarde	2. In the afternoon
3. Por la noche	3. At night
4. Comí paella	4. I ate paella
5. Salí con mis amigos	5. I went out with friends
6. Escribí SMS	6. I typed messages
7. Vi monumentos interesantes	7. I saw interesting monuments
8. Bebí una limonada	8. I drank a lemonade
9. Conocí a un chico / a español/a	9. I met a Spanish boy / girl
10. Dormí	10. I slept
11. En un restaurante	11. In a restaurant
12. En el parque	12. In the park
13. A mi hermano /a	13. To my brother / sister
14. En la ciudad	14. In the city
15. En una cafetería	15. In the café
16. En el hotel	16. In the hotel
17. En la playa	17. On the beach

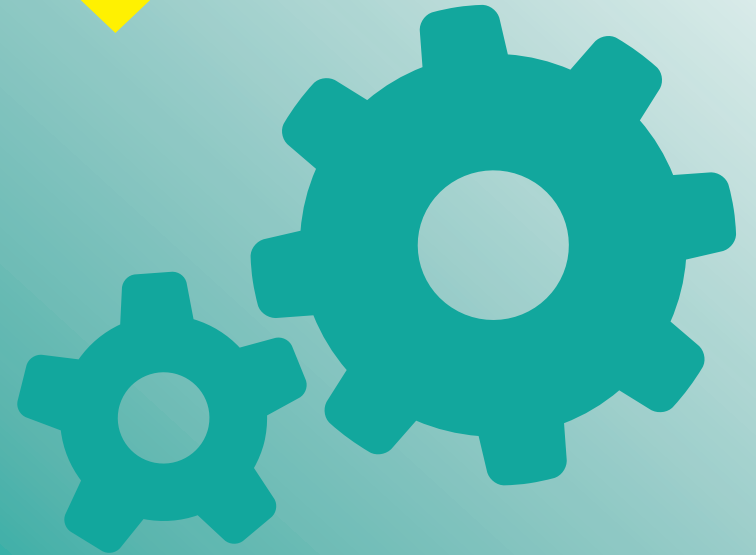
¿Cómo te fue? – How was it?

1. Fue guay	1. It was cool
2. Fue genial	2. It was great
3. Fue flipante	3. It was amazing
4. Fue divertido	4. It was fun
5. Fue regular	5. It was OK
6. Fue aburrido	6. It was boring
7. Fue horrible	7. It was dreadful
8. Fue horrible	8. It was horrible
9. Fue un desastre	9. It was a disaster

¿Qué tal lo pasaste?

1. Me gustó	1. I liked it
2. No me gustó	2. I didn't like it
3. Me encantó	3. I loved it
4. Me lo pasó bien	4. I had a good time
5. Me lo pasó guay	5. I had a cool time
6. Me lo pasó bomba	6. I had a blast
7. Me lo pasó mal	7. I had a bad time
8. Me lo pasó terrible	8. I had a terrible time

IT





World Wide Web

- The World Wide Web is a huge collection of websites that we can access using the Internet
- Each website contains web pages which are navigated to via hyperlinks
- Web pages contain different types of information including images, text and multimedia

What happens when I view a web page?



Key terms

Term	Definition
WWW	Stands for World Wide Web and is the collection of all the web sites we can access.
HTML	Stands for Hypertext Markup Language and describe the content of a web page using tags.
CSS	Stands for Cascading Style Sheets and is how the style of a webpage can be changed.
Tag	An individual element that makes up part of a web page. For example <H1> This is a heading </H1>.
Hyperlink	A way of moving from one web page to another – these are used to navigate around a website.
JavaScript	The programming language commonly used alongside HTML to make a website interactive.

HTML and CSS

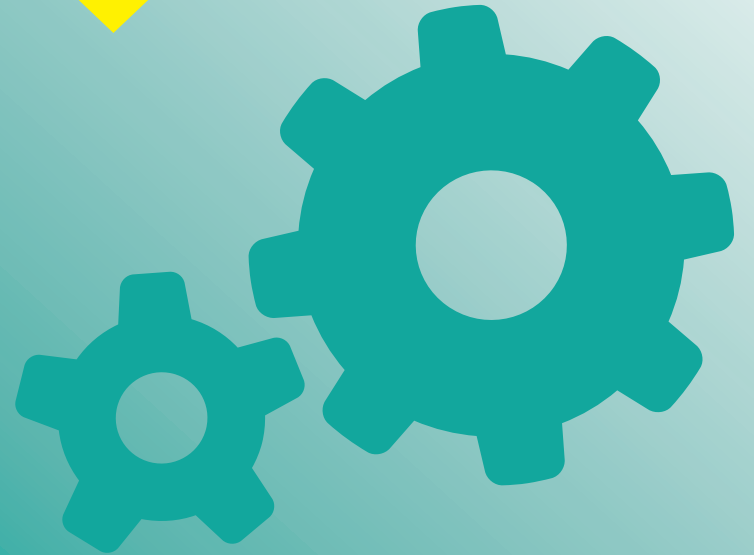
HyperText Markup Language is the language of the web
It describes the **content** in web pages

Cascading Style Sheets define the **style** and layout of web pages
Changing the Style means changing colours, layout, font style and font size.

Common Tags

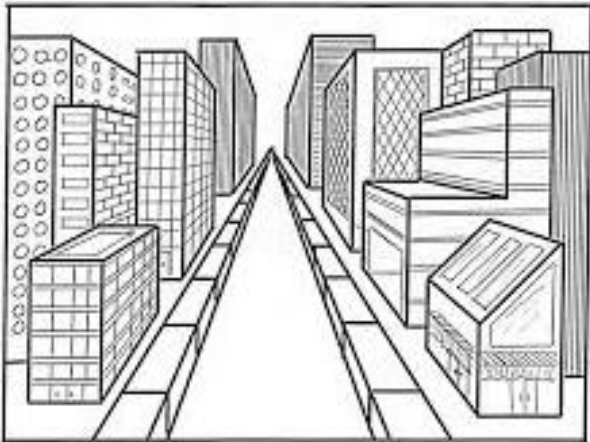
Tag	Use	Example
<H1>	One of a few tags that can be used to create a heading – this is the largest heading you can make.	<H1> This is a heading </H1>
<p>	The tag which is used to create a paragraph of text.	<p> This is a paragraph of text </p>
	The tag which is used to add an image to a web page.	<img src = "img_girl.jpg" alt = "Girl in a jacket" width="500" height="600
<a href>	The tag which is used to create a hyperlink in a webpage.	 Visit W3Schools.com!
<div>	The tag which is used to segment a web page in to different sections to allow more sections to have different CSS added individually.	<div> <H1> This is a heading </> </div>
<head>	The tag which goes at the top of the page and usually only contains meta data, the webpage title and style tags.	<head> <title> This is the page name </> </head>
<body>	The tag which contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.	<body> <h1>This is a heading</h1> <p>This is a paragraph.</p> </body>

Art



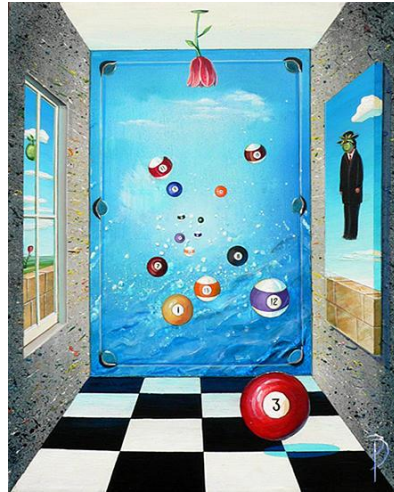


During this half term you will be learning about perspective. **One point perspective** is a drawing method that shows how things appear to get smaller as they get further away, converging towards a single 'vanishing point' on the horizon line. It is a way of drawing objects upon a flat piece of paper (or other drawing surface) so that they look three-dimensional and realistic.



https://youtu.be/oRYhZrZ8G_Y

- **Deliberate Practice**
Research how perspective has been used by artists. Complete the sheet in your skills booklet



Above you can see the painting "Personal Values" by Rene Magritte (who was a Surrealist artist). You can see the scale of the objects seems wrong for the size of the room.

- **Deliberate Practice** - Find out what Surrealism is and what makes a picture Surreal?

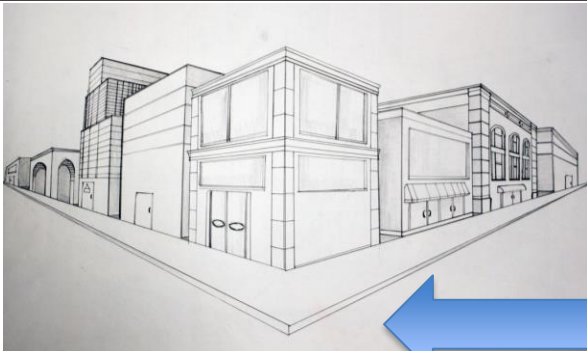
Example of a surreal room

Deliberate Practice

- Produce an artist research page on Surrealism use your artist research page in your KO to help.
- Using one point perspective create a Surreal room. You can include anything in your room the stranger the better. However you must stick to the rules of perspective.

Careers Link: Architect

Which other subject areas might you need to be an architect?



Two point perspective is where there is one horizon line and 2 vanishing points.
Deliberate Practice challenge draw a street using 2 point perspective.

Keywords

Space, Distance, Converging, Parallel, Horizontal, Vertical, Vanishing point, Horizon line, Linear, Receding, Birds eye view Worms eye view.

Design Technology





1: Mechanical Devices - Motion

There are four types of motion:

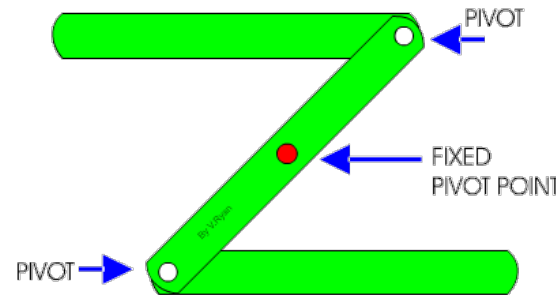
Linear Motion is movement in one direction along a straight line.		
Oscillating Motion This motion is similar to reciprocating motion, but the constant movement is from side to side along a curved path.		
Rotary Motion Examples of circular motion include a ball tied to a rope and being swung round in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

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: 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.	

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.		

3. Boards

Type	Description and uses
Corrugated card	<ul style="list-style-type: none"> strong and lightweight used for packaging protection and point of sale stands available in different thicknesses
Duplex board	<ul style="list-style-type: none"> large foam-based board different finishes available including metallic and hologrammatic used for food packaging, e.g. take-away pizza boxes
Foil lined board	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Has been treated so that it will give a high quality finish with inkjet ink available in matt and gloss
Solid white board	<ul style="list-style-type: none"> top quality cardboard made from quality bleached wood pulp. used for hard backed books and more expensive items excellent print finish



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.	

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.

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

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

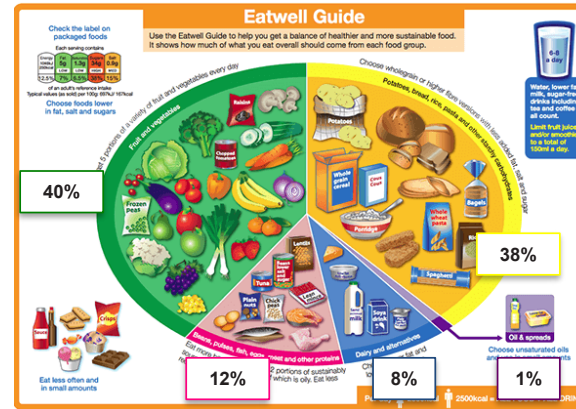




Dietary guidelines

Health experts and the Government have worked together and produced a set of **Dietary Guidelines** and an **Eatwell Guide** to help people make informed choices when they are deciding what to eat. These are shown below. You will see that there are also guidelines about your lifestyle choices as well as what you eat.

1. Base your meals on **starchy foods**.
2. Eat lots of **fruit and vegetables**.
3. Eat more **fish** – including a portion of **oily fish** each week.
4. Cut down on saturated fat and sugar.
5. Eat less **salt** – no more than **6g a day** (1 level teaspoon) for adults.
6. Get active and be a healthy weight.
7. Don't get thirsty – drink plenty of water.
8. Don't skip breakfast.



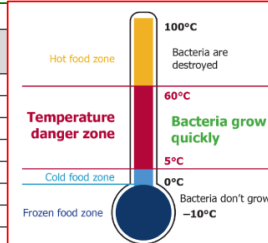
Name of the Nutrient	Sources	Function	
Carbohydrates (energy giving food)	Rice, potato, wheat, sugar	Provides energy	
Fats (energy giving food)	Butter, ghee, milk, cheese	Gives more energy compared to carbohydrates	
Vitamins and Minerals (protective food)	Fruits and vegetables	Required for normal growth and development	
Proteins (body building food)	Milk, eggs, meat, fish, soybean	Helps in building and repair of body	

Hygiene rules

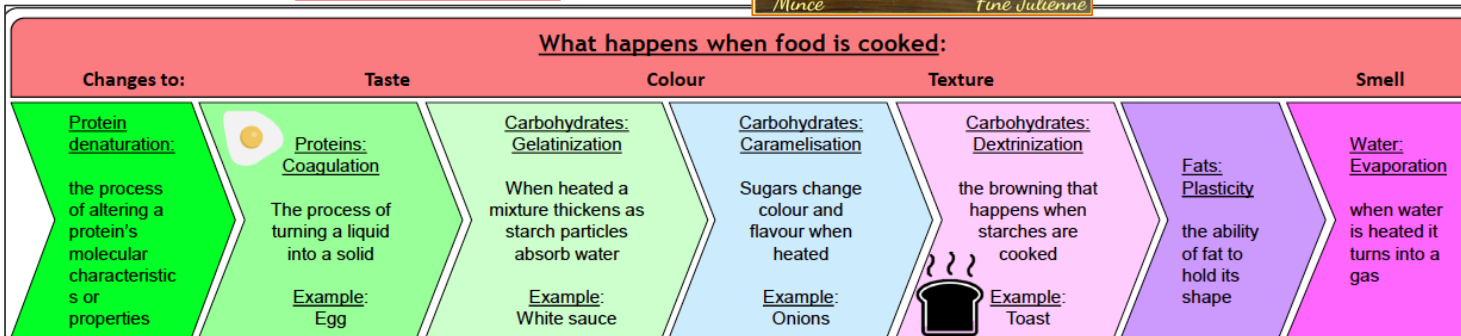
Wash hands!
Tie hair up
Wear apron
No false nails or nail varnish
Antibacterial spray on surfaces before & after cooking

Key abbreviations: Weights and Measurements

L	Litres	
g	Grams	
ml	millilitres	1000ml = 1 litre
Kg	kilograms	1000g
Tbsp	tablespoons	15ml
Tsp	teaspoon	5ml
1pt	1 pint	568ml



Food skills	Techniques
Knife skills - Chopping	Bridge hold, claw grip, slice, dice, julienne, baton's, meat and vegetable preparation
Organisation / tidying skills	Being able to work hygienically and safely to produce recipes and ensure all equipment, utensils and work area is fully clear and tidy. Teamwork and communication. Following personal hygiene rules.
Food safety	Using food probes for meat to check for safe temperatures (75C)
Weighing and measuring	Demonstrating accurate measurement of liquids and solids. Being able to use both manual and digital scales.
Use of equipment	Oven, hob, chopping boards, knives, sieve, mixing bowl, measuring jug/spoons
Making sauces	Reduced sauce, roux sauce
Working with ingredients	Using a range of ingredients from the Eatwell Guide to create recipes.
Test for readiness	Using a knife/skewer, finger or poke test, bite or visual colour check to establish whether a recipe or ingredient is ready.
Adapting recipes	Using a nutritional analysis program to analyse recipes. Making adaptations to make the recipe better suit the Eatwell Guide / healthy eating requirements.
Judge and manipulate sensory properties	Demonstrate how to taste and season during cooking. Self-evaluation of practical dishes made.
Food science	Learning how foods react with heat and acid and adapt accordingly.
Cooking methods	Using a variety of cooking methods including conduction, convection and radiation.
Food styling	Quality and creative presentation techniques. Using garnishes and decorative techniques where possible.



Why food is cooked:

1. To make it safe to eat
2. To improve the shelf life
3. To develop flavour
4. To improve texture
5. To give variety

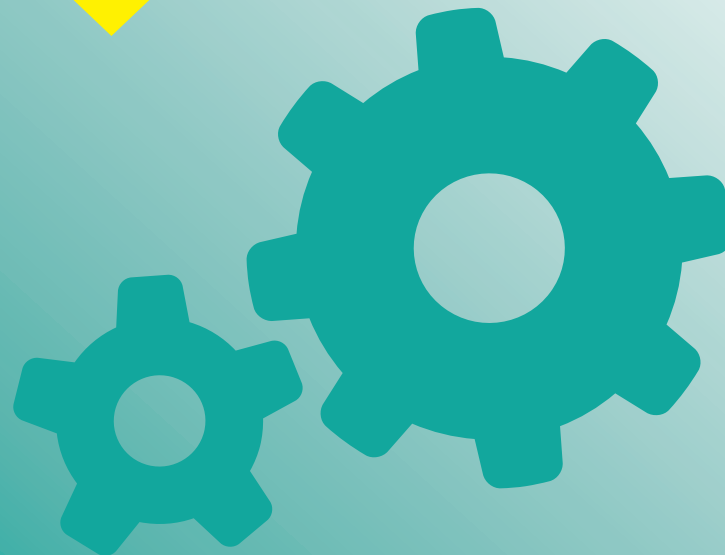
Methods of heat transfer

Convection - when the environment (air, water or oil) is heated up.
e.g. - baking a cake
- boiling an egg

Conduction - when heat is transferred directly.
e.g. - frying an egg

Radiation - when heat radiates
e.g. - toast

Music





BLUES Knowledge Organiser

C D E F G A B C

C D E F G A B C

C D E F G A B C

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	<u>E^b</u>	F	G	B ^b	C

You can also add a sharpened 4th

F# G# A# B# C# D# E# F# G# A# B# C# D# E# F# G# A# B# C# D# E# F# G# A# B# C# D# E#

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

1 C 2 C⁷ 3 C⁷ 4 C⁷

LYRICS: Line 1 IMPROVISATION: 2 bars

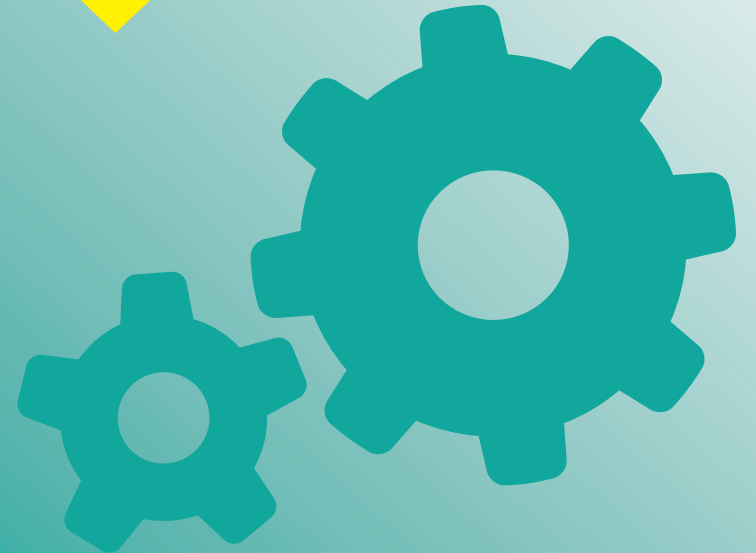
5 F⁷ 6 F⁷ 7 C⁷ 8 C⁷

LYRICS: Repeat line 1 IMPROVISATION: 2 bars

9 G⁷ 10 F⁷ 11 C⁷ 12 C⁷

LYRICS: Repeat line 2 IMPROVISATION: 2 bars

Drama





Y8 Drama - Joyriding – HT3 – Knowledge Organiser	
<p>Key Techniques:</p> <p>Thought-Tracking: when a character speaks their thoughts aloud to the audience (no other character on stage can hear this.)</p> <p>Physical Theatre: Using your body to tell a story rather than words/ Creating objects on stage using your body</p> <p>Hot Seating: a drama strategy in which a character or characters, played by the teacher or a child, are interviewed by the rest of the group.</p> <p>Split Scene: When two or more scenes are played on stage at the same time on stage. Each scene may freeze and un-freeze to allow the other to be heard.</p>	<p>Key Vocabulary:</p> <p>Sub-text: The hidden meaning behind the words a character says</p> <p>Opinion: a view or judgement formed about something, not necessarily based on fact or knowledge.</p> <p>Poem: a piece of writing in which the expression of feelings and ideas is given intensity by particular attention to diction (sometimes involving rhyme), rhythm, and imagery.</p> <p>Tableaux: A still image - a group of actors or motionless figures representing a scene from a story</p> <p>Forum: a meeting or medium where ideas and views on a particular issue can be exchanged.</p> <p>Flashbacks: a scene that takes place before a story begins that takes the audience back in time to the past events in a character's life.</p>
<p>News Report Stimulus:</p> <p>17:53 8 Apr 2019 (Liverpool Echo) A joyrider tanked up on booze killed his friend after speeding away from police in a stolen car. Joseph Lane, 27, would "never forgive himself" for the fatal crash, a court was told. The 27-year-old and his passenger Brandon Griffin were flung through the windscreen of the Vauxhall Vectra after Lane lost control and smashed into a telegraph pole, flipping onto its roof, reports the Liverpool Echo. Mr Griffin, 21, is believed to have been involved in the theft of the car from a driveway in Birkenhead the same morning and had offered Lane a chance to drive it only minutes before the devastating collision. Lane, of Tranmere, was jailed for eight and a half years at Liverpool Crown Court today after admitting causing Mr Griffin's death by dangerous driving.</p>	
<p>Poetry Stimulus:</p> <p>The identification By Roger McGough</p> <p>So you think its Stephen? Then I'd best make sure be on the safe side as it were. Ah, there's been a mistake. The hair you see, it's black, now Stephens fair ... What's that? The explosion? Of course, burnt black. Silly of me. I should have known. Then let's get on.</p> <p>The face, is that the face mask? That mask of charred wood blistered scarred could that have been a child's face? The sweater, where intact, looks in fact all too familiar. But one must be sure.</p> <p>The scout belt. Yes that's his. I recognise the studs he hammered in not a week ago. At the age when boys get clothes-conscious now you know. It's almost certainly Stephen. But one must be sure. Remove all trace of doubt. Pull out every splinter of hope.</p> <p>Pockets. Empty the pockets. Handkerchief? Could be any schoolboy's. Dirty enough. Cigarettes? Oh this can't be Stephen. I don't allow him to smoke you see. He wouldn't disobey me. Not his father. But that's his penknife. That's his alright. And that's his key on the key ring Gran gave him just the other night. Then this must be him.</p> <p>I think I know what happened ... about the cigarettes No doubt he was minding them for one of the older boys. Yes that's it. That's him. That's our Stephen.</p> <p>Joyriding: the action or practice of driving fast and dangerously in a stolen car for enjoyment.</p> <p>The sentence for people convicted of aggravated car theft or joyriding is severe and includes long prison terms and large fines. A prison term of up to 13 years may be imposed if the theft and subsequent driving led to a death. (May 2021)</p>	