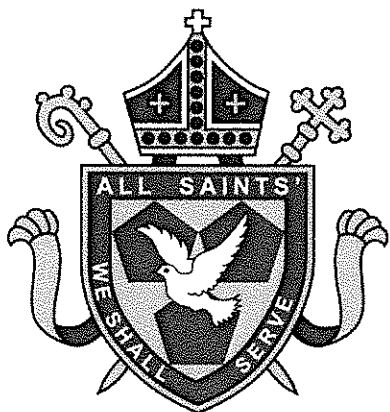
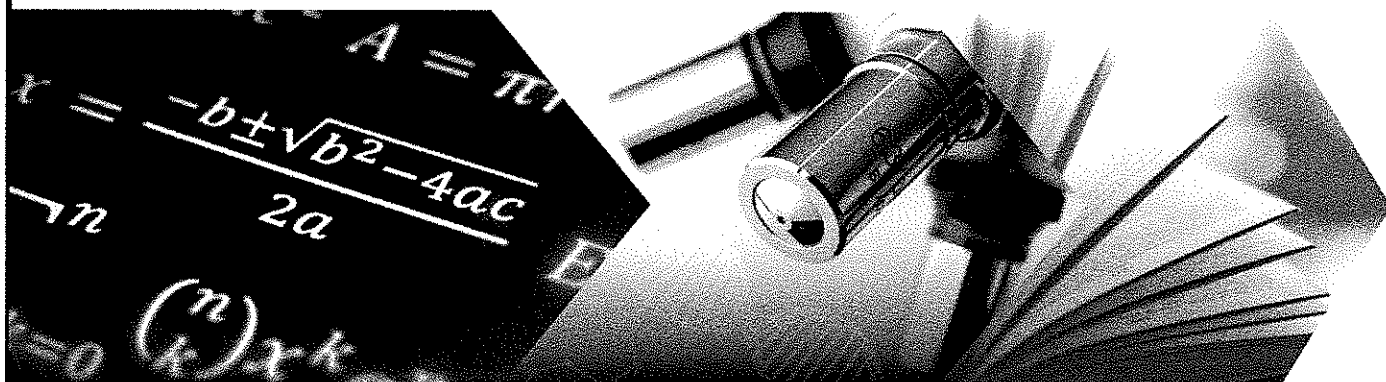




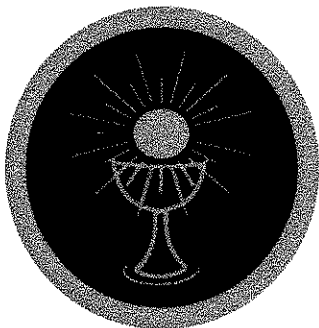
ALL SAINTS'

CATHOLIC VOLUNTARY ACADEMY

Year 7 Absolutes



Opportunity . Achievement . Success



Term 3 2024-25

NAME:

FORM:

All Saints' Drama Department : **KS3 Channel Hop** –

1. To know 5 different TV genres and their features, i.e. chat show 2. To know the typical features associated with the following TV genres: Chat Show, The News, Adverts, Dramas, Cliffhangers 3. Chat show/game show: audience participation, host, facial expressions, dramatic pause, exaggerated gestures, varied vocal expression such as pitch (low/high) and volume (soft/loud) 4. Understanding the different components of the The News: Headlines, reporter at the scene, Broadcaster, Weather person, Sports' news, Celebrity News and to be able to write a news report. 5. To understand what makes a successful TV Advert: pun, catchy slogan, humour, alliteration, persuasive techniques.	Drama Skills you need to demonstrate in this unit: Mime – suggesting action, character or emotion, without using words. Using only gesture, facial expression and movement. Freeze frame – pausing the performance and capturing the still image. Use of Levels – each taking on a different physical height position within the performance to create visual levels. Chronology – order of time (i.e. being able to move forwards and backwards through your performance.) Blocking – consciously being aware of your positioning in the performance area so as not to 'block' another performer or the audience Jingle – short song or tune used in advertising to make the product memorable.
Understanding of vocal and physical skills: Using the mouldy parmesan criteria – remembering the mnemonic and showing these skills in practice Mouldy (movement), parmesan (posture), grates (gesture – use of hand movement to signal thoughts and feelings), itself (interaction between other characters), very (vocal expressions – the way you use your voice) pitch (low pitch or high pitch) pause (stops between speech) projection (use of how you project your voice loudly or softly), pace (speed of speech), flipping easily (facial expressions).	
Performance tasks • Working in a group to devise a series of TV programmes which lasts for approximately 3 minutes, demonstrating the mouldy parmesan criteria and features of your chosen genre, being able to switch between them at any given moment on hearing the words 'Channel Hop'. • Working in a group to devise a whole TV news broadcast, including all of the elements listed above. • To independently lead whole class warm ups (Drama games)	Evaluative / appraisal tasks 1. Evaluate a performance by your peers, using at least 3 of the 'mouldy parmesan' criteria explain what aspects of the performance went well and what aspects could be improved – be able to say why 2. Evaluate your own performance, using at least 3 of the 'mouldy parmesan' criteria explain what went well and what you could improve next time

Different adjectives that you can use to demonstrate an understanding of the Mouldy Parmesan criteria:	Drama Skills you need to demonstrate in this unit:
Vocals: Pitch - High, low, deep, squeaky, shiny, croaky, grating, brittle Pace - Fast, slow, halting, abrupt, stuttering, stilted, hesitant, controlled Projection - Soft, quiet, loud, whisper, shout, scream, bellow, shriek, shriek, mutter, mumble Pause – stopping your speech for effect (these can be for long or short periods of time.) Tone - Harsh, gentle, sarcastic, forceful, firm, derogatory, cold, angry, persuasive, proud, cheeky, anxious, timid, fierce, sensitive, trusting, matter of fact, mocking Facial Expression: Emotion - Happy, cheerful, upset, hurt, eager, anxious, untrusting, fearful, rejected, smug, defiant, distressed, thoughtful, sly, distraught, spiteful, aggressive, friendly Eyes - Wide, glaring, squinting, teary, hopeful, tightly shut, shifty, rolling, winking Eyebrows - Raised, lowered, furrowed, frown, inquisitive Mouth - Opened, jaw-dropped, closed, smile, quivering, lip-biting, pursed lips, clenched, grating teeth. Posture - Upright, slouched, relaxed Gestures- Clenched fists, pointing, open handed, shrugged shoulders, hands in pockets, waving, beckoning over, hands on face, head in hands, wiping eyes, nodding Movement - Running, walking, crouching, cowering, sitting, hunched over, pacing up and down, jumping, skipping, limping, swaying	1. Still image – Creating a still image, like a photograph depicting an event. 2. Role on the wall - Using a template of a body and writing information inside showing character emotions 3. Body Language – the way you incorporate gestures and physical stance to show a character's thoughts and feelings. 4. Hot seating – Asking questions to characters that respond in role 5. Thought tracking – Saying the thoughts of the characters out loud 6. Mime – suggesting action, character or emotion, without using words. Using only gesture, facial expression and movement. 7. Use of Levels – each taking on a different physical height position within the performance to create visual levels. 8. Blocking – consciously being aware of your positioning in the performance area so as not to 'block' another performer or the audience 9. Character – to take on the role of another person or to play a different part. 10. Narration – a person who narrates something, especially a character who recounts the events of a novel or narrative poem 11. Scripted – the events, characters and stage directions of a play written down. 12. Monologue – a long speech by one actor, where they share their thoughts and feelings. They are often by themselves and seem to be talking to themselves.
Performance tasks • Working in a group to create a still image based on inferred ideas. • Working in a group to devise a performance, using the script as the basis for your ideas. • Learning lines from a script to perform a character/scene from the play. • To work independently, taking on the role of a character in hot seating, being able to think on the spot and sustain that role through questioning. • To devise ideas that go beyond the script, using the script as a starting point.	Evaluative / appraisal tasks 1. Evaluate a performance by your peers, using at least 3 of the 'mouldy parmesan' criteria explain what aspects of the performance went well and what aspects could be improved – be able to say why 2. Evaluate your own performance, using at least 3 of the 'mouldy parmesan' criteria explain what went well and what you could improve next time

Concepts

Sin

An act that goes against the teachings of the Bible.



Patriarchy

A system in which men hold power and women are excluded from it.



Injustice

When a result is viewed as being unfair. It may be based in bias and prejudice.



Morality

Principles around how we distinguish between right and wrong, or good and bad behaviour.



Terminology

Figurative Language

Techniques such as similes, metaphors, personification, and allusion



Connotation

An idea or feeling which a word invokes in addition to its literal meaning.



Genre

A style or category of art, literature, or music.



The Gothic

A genre of literature that combines elements of the uncanny and romance.



Conventions

The 'ingredients' that are typically found within a genre.



Voice

The perspective a story or poem is told from.



Vocabulary

- **Discrimination:** the unjust or prejudicial treatment of different categories of people, especially on the grounds of ethnicity, age, sex, or disability.
- **Forbidden:** not allowed: banned.
- **Protagonist:** the main figure or one of the most prominent figures in a situation.
- **Obscure:** not clearly expressed or easily understood.
- **Barbaric:** savagely cruel.
- **Patriarchy:** a system in which men hold power over women.
- **Foreboding:** a feeling that something bad will happen; fearful apprehension.
- **Duplicitous:** deceitful.
- **Acumen:** the ability to make good judgements and take quick decisions.
- **Malign:** evil in nature or effect.
- **Unconventional:** Not based on or conforming to what is generally done or believed.
- **Apathetic:** not having or showing much emotion or interest in something or someone.
- **Dependent:** requiring someone or something for financial or other support.
- **Monstrous:** inhumanely or outrageously evil or corrupt.
- **Nemesis:** a longstanding rival or arch-enemy.
- **Allusion:** an expression designed to call something to mind without directly referencing it.

Further Knowledge

- The term 'gothic' comes from the Germanic tribe 'the Goths', who played a part in the fall of the Roman Empire. The Goths are sometimes called barbarians. The word barbarian comes from the Latin (and modern French!) for beard.
- Figures from **The Age of Enlightenment (C18-19)** believed that scientific progress was the only way to advance society. They tried to rid Europe of superstition and ignorance by promoting reason and logic.
- A group of poets, artists and thinkers called the Romantics challenged this because they believed that not everything can be explained by science; too much reason rids the world of beauty and mystery.
- The gothic genre first emerged from the **Romantic movement**. It used art and ideas from the Dark Ages, wild emotion and nature to contrast modern ideas about science and logic.
- Gothic writing transformed into the popular **Victorian ghost story**.
- Gothic writers are preoccupied with the supernatural as they believe that not everything has a scientific explanation.
- They believed that nature is 'sublime': it has the power to simultaneously inspire awe and terror.
- They challenged society's ideas about propriety and emotion. Showing wild emotion was 'uncouth', but not to the gothic writers, who often depicted passion and rage.
- The role of the female characters was explored: often in gothic texts, there are powerful female roles, which contrasted the contemporary society.
- They were very interested in the psychological exploration of characters, particularly in relation to themes of madness.

Sawbones Crib Sheet

Setting

1. Wild landscapes
2. Medieval style castles, churches or abbeys
3. Gloomy, decayed and ruined environments
4. Remote, uninhabited places (older gothic) or monsters intermingling in everyday life (newer gothic)
5. Volatile and threatening weather (symbolism)

Gothic Genre features

1. Death and darkness
2. Supernatural (magic, ghosts, monsters, curses)
3. Focus on body parts
4. Depiction of madness and hyperbolic emotion, including psychological episodes
5. Mystery, terror and suspense

Mystery/Darkness

1. Links with light and dark stem from Genesis where God created light.
2. Darkness and the night are associated with the Devil, misery, ignorance, and evil.
3. Gothic buildings, with their abundant carvings, crevices, and shadows, can conjure an aura of mystery and darkness and often served as appropriate settings.

Characters

Ezra McAdam: our protagonist who is formerly enslaved person. His dream is to become a surgeon like his master.

Loveday Finch: a young woman who used to assist her father with his magic act. She is determined to find out what happened to her father.

Mr William McAdam: Ezra's master who freed him from slavery and gave him an apprenticeship. He is known for being an excellent surgeon.

Mr Charles Finch: a now dead, magician who has died in mysterious circumstances.

Mr Lashley: another surgeon who is known for being a not very effective surgeon.

Dr James McAdam: the nephew of Mr McAdam who does not seem to like Ezra and the choices Mr McAdam has made.

Prince Mahmoud: an Ottoman prince who was kept as a captive before fleeing to London.

Key plot information

In 18th century London, 16-year-old Ezra is working as apprentice to a highly respected surgeon, William McAdam. He knows that his impressive knowledge of anatomy and skill at the dissection table will ensure he has a trade for life. Yet whilst he is grateful to his master, who rescued him from a life of slavery, Ezra is eager for independence and to be his own man.

A strange series of events then changes everything. Now, McAdam is dead, and Ezra is alone - except for the unconventional Miss Loveday Finch, daughter of a magician, who is looking for answers about her father's death. Soon, the pair find themselves tangled in an adventure featuring grave-robbing, body-switching and political intrigue, which takes them a journey across London from the Operating Theatre at St Bart's, to the vaults of Newgate Prison, to the shadowy Ottoman Embassy.

Connections

Religious Imagery

- Temptation
- Science versus Religion
- Sin and Transgression
- Light and Dark
- Heaven and Hell
- Envy
- Truth

Inner Conflict

- Morality
- Deception and Truth
- Power and Control
- Temptation
- Envy
- Desire
- Regret
- Sin and transgression

Light and Dark

- Symbolic of Fear
- Literal Light and Darkness in setting
- Heaven and Hell
- Good and Evil
- Duplicity of Man
- Guidance
- Truth and Lies

Geography – How Does the Atmosphere Impact Our Lives?

1. Weather and Climate

The height above sea level

- Altitude is the height above sea level
- The higher the altitude, the lower the temperature.
- The light air which rises to the tops of mountains is less dense so heat transfers slowly.
- Every 100m increase in altitude, there is a 1°C decrease in temperature

Latitude

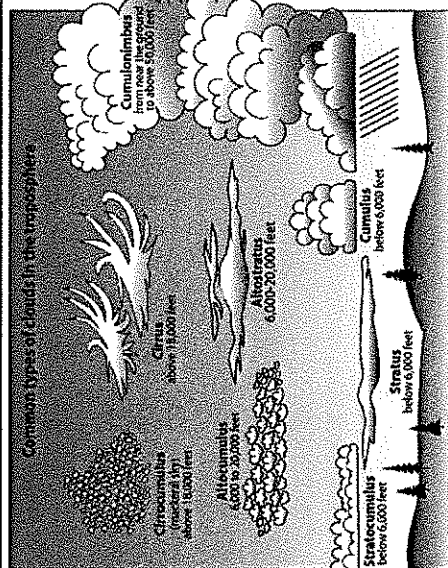
- Latitude is the distance from the equator.
- The higher the latitude, the lower the temperature.
- Along the equator, the sun is directly overhead and has to heat a smaller area, so the temperatures are higher.
- At the poles, the sun is at a lower angle and has a larger area to heat, so the temperatures are lower.

Distance from the sea

- Areas nearer to the sea are often cooler in summer but warmer in winter (they have less of a temperature range than inland areas).
- Oceans heat up and cool down much more slowly than land. This means that coastal locations tend to be cooler in summer and warmer in winter than places inland at the same latitude and altitude. Glasgow, for example, is at a similar latitude to Moscow, but is much milder in winter because it is nearer to the coast than Moscow.

3. Clouds

- First, evaporation has to occur where water changes state to a gas (water vapour).
- Then, condensation in the atmosphere happens, water vapour starts to turn back in to a liquid.
- Clouds are made of tiny drops of water or ice crystals that settle on dust particles (condensation nuclei) in the atmosphere.
- The droplets are so small - a diameter of about a hundredth of a millimetre - that each cubic metre of air will contain 100 million droplets.
- An okta is a unit of measurement used to describe the amount of cloud cover at any given location.



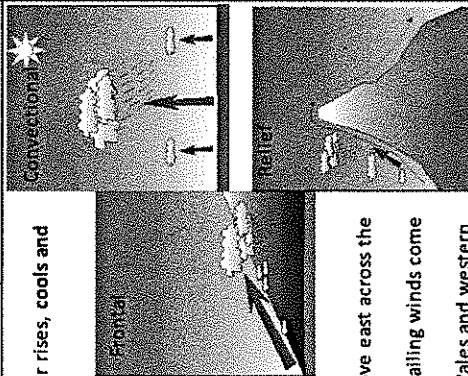
-

4. Types of rainfall

- Convictional rain: the sun heats the land and the air above. The warm air rises, cools and condenses, forming clouds. Rain can then occur.
- Frontal rain: warm air meets cold air, the warm air is forced to rise over the cold which forces condensation and therefore rains heavily along the front (where the warm and cold air meet).
- Relief rain: warm, moist air is forced to rise over high areas like mountains or hills. Air cools and condenses, forming clouds which rain on the windward side, leaving the leeward side in the rain shadow as the warm air descends and becomes drier.

Relief rain in the UK

- Depressions pass over Britain frequently. They form in the Atlantic and move east across the country but it rain the most in the west. These highland areas receive more rain as prevailing winds come from the south west carrying moisture from the Atlantic Ocean.
- The warm, moist air is forced to rise over mountains, particularly in Wales and western Scotland, the air then cools and condenses, creating lots of rain in the west of the UK.



Weather term	Definition	Unit	Equipment
Temperature	How hot, cold, warm or cool it is	Degrees Celsius (°C)	Thermometer
Precipitation	Water falling from the sky e.g. rain, snow, hail, sleet	Millimetres (mm)	Rain gauge
Cloud Cover	The amount of clouds in the sky	Okta (eighths)	Eyes
Wind Speed	How fast the wind is blowing	Miles (mph) or kilometres per hour (kph) (sometimes knots too!)	Anemometer
Wind direction	The direction from which the wind is blowing	Compass direction (N, E, S, W)	Weather vane
Air Pressure	The force exerted by the air	Millibars (mb)	Barometer
Humidity	The amount of water vapour in the air	Percentage (%)	Hygrometer
Sunshine	Light and warmth from the sun	Hours	Campbell Stokes Recorder
Multiple weather types	Temperature, pressure, humidity, wind speed and direction can be measured	°C, mb, %, mph, NSEW	Weather balloon

Keywords and Definitions

Weather	Evaporation	Latitude	Distance from the equator.
The day to day conditions, made up of temperature and precipitation. Studied by a meteorologist.	When a liquid turns into gas		
Climate	Condensation	Altitude	Height above sea level.
The average weather conditions over a longer period of time.	When water vapour cools down as it rises and turns into clouds.		
Extreme Weather	Precipitation	Air Mass	An air mass is a large parcel of air in the atmosphere.
Severe weather that only occurs 5% or less of the time.	A geographical term for rain, hail, sleet and snow.		

Geography – How Does the Atmosphere Impact Our Lives?

5. Weather Symbols

Warm Front	Sunny day	Isobars
Thunder	Heavy Snow	Light Snow
Sleet	Cloudy	Heavy Rain
Clear Night	Light Rain Shower	Mist
	Sunny intervals	Hail

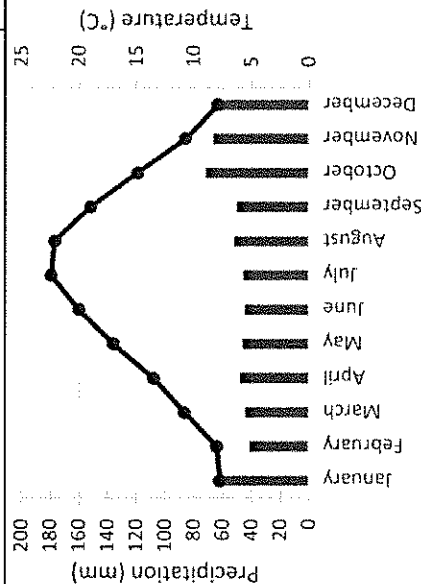
6. Synoptic Charts

- High pressure areas shown with an H and higher millibars (mb) that surrounding area
- Low pressure areas shown with an L and lower millibars (mb) that surrounding area
- Wind is air moving from high to low pressure, so wind is shown by isobars being packed together
- Clouds form in areas of low pressure
- Areas of high pressure often have clear skies
- Warm fronts are shown by red lines with semi-circles on
- Cold fronts are shown by blue lines with triangles on
- Occluded fronts are shown by pink lines with semi-circles and triangles on



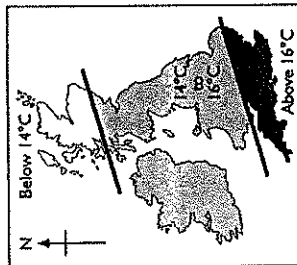
7. Climate Graphs

- Months along the x-axis
- Precipitation (rainfall) and temperature are both on the y-axis
- Precipitation is always shown by the bar chart
- Temperature is always shown by the line graph
- Climate graphs can be used for finding the warmest and coolest months
- Finding the wettest and driest months
- Calculating the precipitation and temperature range
- Discovering if places have seasons
- Planning a holiday at the right time!

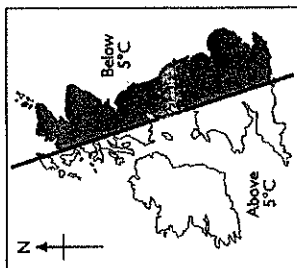


8. UK weather and climate

- The North of the British Isles is 2 Degrees cooler than the south in summer. Scotland is cooler in summer and winter.
- The South of England is warmer in Summer months due to the fact that it is at a lower latitude (closer to the equator).
- During winter months the West side of the UK is kept warm by the North Atlantic Drift, or Gulf Stream, which travels at 1mph and brings water at 25 Degrees from the Gulf of Mexico towards the UK.
- The UK has different air masses that impact the weather which can be tropical, arctic, maritime or continental



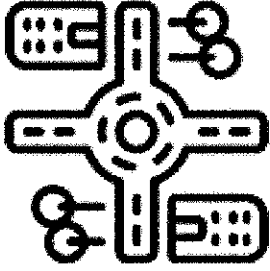
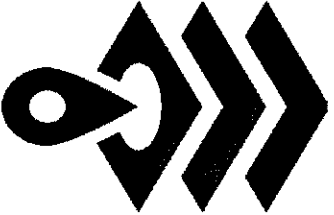
SUMMER TEMPERATURES



WINTER TEMPERATURES

Test Yourself Questions

- What is latitude and what is altitude and how do they affect temperature?
- How does 'distance from the sea' affect temperature?
- What is a meteorologist?
- Explain 3 ways that weather can be measured.
- Explain how clouds form.
- Outline the three different types of rainfall.
- Describe rainfall patterns in the UK using the map above.
- Explain why different symbols are used for different types of weather.
- Explain why air pressure, fronts and weather symbols might all be used on the same map.
- Describe the climate of Reading using the climate graph above.
- Describe how weather is different across the UK.
- Explain how the atmosphere can impact your life.

Geography Jobs	
1.Town Planner Job Role: Responsible for <u>developing Towns/Cities</u>. Including the development of: • <u>Transport</u> • <u>Housing</u> • <u>Buildings</u> (schools, hospitals, police stations) • <u>Greenspace</u> • <u>Facilities</u> (water, electric, internet) Key Skills: • <u>Good communication</u> – you often have to convince people why you are spending a large amount of money on a feature of the plan. • <u>Budgeting</u> – Overspending on towns is easy as you want the best for the residents. • <u>Self-motivation</u> – you will often be planning alone so you must be motivated in wanting the best for residents. Geography Links: • Knowledge of the <u>physical environment</u> and how this can <u>change</u> • <u>Map skills</u> • Knowledge of how <u>humans use the physical environment</u>	 2. GIS Job Role: Responsible for <u>making and updating</u> geographical information systems the types of <u>layers</u> a GIS expert could plot include: • <u>Roads</u> and their names • <u>Buildings</u> (schools, hospitals, police stations, houses) • <u>Green space</u> • <u>Crime rates</u> • <u>House prices</u> • <u>Air pollution levels</u> Key Skills: • <u>IT knowledge</u> – GIS experts use technology daily. • <u>Problem solving</u> – Thinking outside the box to solve complex GIS issues. • <u>Organised</u> – GIS experts often work on multiple projects at the same time therefore you have to organise your time and energy between them. Geography Links: • <u>Map skills</u> • Knowledge of various <u>physical geographical topics</u> e.g. <u>tectonic hazards</u> • Knowledge of various <u>human geographical topics</u> e.g. <u>population</u> 

Geography Jobs	
3. Renewable Energy Engineer Job Role: Responsible for <u>developing, constructing and maintaining</u> renewable forms of energy such as: • <u>Wind</u> • <u>Solar</u> • <u>HEP</u> – Hydro Electric Power • <u>Biomass</u> Key Skills: • <u>Good communication</u> – you have to ensure the clients <u>understand</u> how the renewable energy works. • <u>Creativity</u> – Governments are always looking for the next renewable energy <u>break through</u>. • <u>Availability</u> – Renewables can <u>break</u>, you need to be 'on hand' as the engineer to be able to <u>fix</u> that problem as soon as <u>possible</u> for the clients that require that energy. Geography Links: • Knowledge of <u>climate change</u> and therefore the <u>importance of renewables</u> • Knowledge on <u>countries changing energy mix</u> • <u>Map skills</u>	Key terms: Town Planner – A town planner is responsible for the design and development of urban areas, such as towns and cities. Resident - Someone who lives in an area. GIS – Geographic Information Systems. Satellite Imagery - An image taken from a satellite which is a 'birds eye view'. Non-Renewable Energy - Energy cannot be replaced once their energy source is used up. E.g. coal, oil and gas. Renewable energy - Energy that can be used over and over again. E.g. wind, solar and hydro. Geologist - Someone who studies materials, processes, products, physical nature, and history of the Earth. Forensic Geologist - Aid in criminal investigations through gathering and analysing geological evidence. Non-Governmental Organisation - is a non-for-profit organisation that operates independently of any government, typically the purpose is to address an issue. Test Yourself Questions: 1. Why is town planning important? 2. Why would it be important for town planners to plan ahead? 3. How would GIS fit into the career you are wanting to do in the future? 4. What layers of GIS would be useful for an airport? 5. What is the difference between renewable and non-renewable energy? 6. What are the positives and negatives of renewable energy? 7. What are the 3 main types of rock, what are the differences between them? 8. How can geology be useful for the police force? 9. Why are NGO's important bodies? 10. How can the different geographical jobs we have looked at work together to help each other?

Timeline	
1. 1170	Thomas Beckett is killed
2. 1122-1204	Eleanor of Aquitaine
3. 1215	Magna Carta
4. 1265	De Montfort's Parliament
5. 1312-1337	Mansa Musa
6. 1348	Black Death
7. 1373-1399	Jadwiga of Poland
8. 1381	Peasants Revolt

The Black Death (1348-9)

Causes

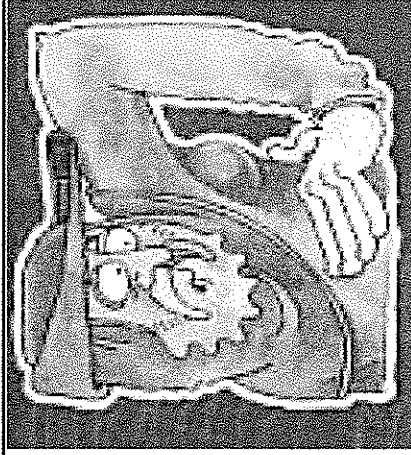
God deserting mankind/ unusual position of the planets/ impure air from a volcano or earthquake/ the Jews

Treatments

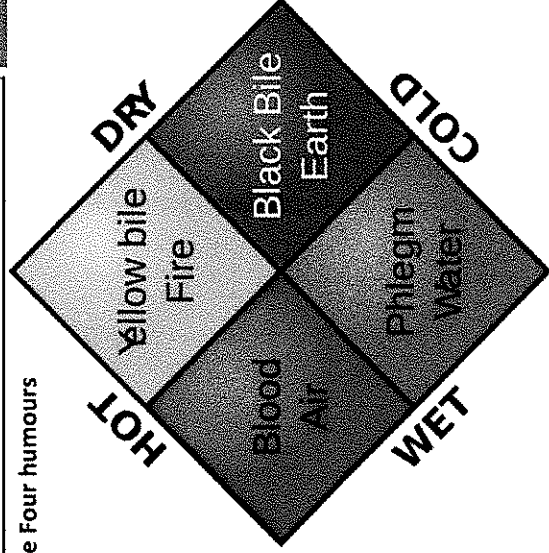
Ask for God's forgiveness/ bleeding/ purging/ strong smelling herbs/ theriaca/ lancing buboes

Prevention

Pray/ Pilgrimage/self-flagellation/ escape!/ carry a posy of flowers/ do joyful things!/ quarantine laws



The Four humours



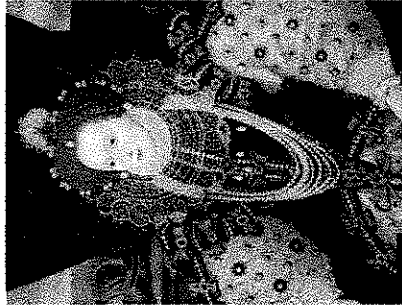
King John placed his seal on the Magna Carta at Runnymede on June 15th, 1215.

Key words	
1. Magna Carta	A document signed by King John to reduce the power of the King and make it more difficult for the King to make laws.
2. The Crusades	The 'Wars of the Crosses', a Holy war in which crusaders from Europe set out to fight Muslim Turks.
3. Tithe	A medieval tax involved paying one tenth of all farm produce to the church
4. Cruck House	Peasants home made out of wood and mud
5. Black Death	The disease that affected England from 1348 onwards. It is estimated that it killed 40% of the population.
6. Bubonic Plague	The more common Plague that was carried in the bloodstream of rats. Fleas bit the rats and become infected. They then hopped onto humans, bit them and passed on the disease.
7. Pneumonic Plague	This was more deadly. It was caught by breathing in the germs when an infected person coughed or sneezed. They would cough up blood and their lungs rotted inside them .
8. Doom Painting	A painting in Medieval churches which showed the joys of heaven and the horrors of hell.
9. Barber Surgeon	Performed simple surgery and cut peoples hair!
10. Apothecaries	People who made and sold medicines made from plants and herbs.
11. Blood-letting	The practice of making someone bleed to help cure illness.
12. Flagellants	People who whipped themselves in order to ask God to forgive their sins. Seen as a prevention for the Black Death.
13. Four Humours	A theory on the cause of illness first proposed by Hippocrates.
14. Astronomy	The study of the planets and stars
15. Symptoms	Signs of an illness or disease

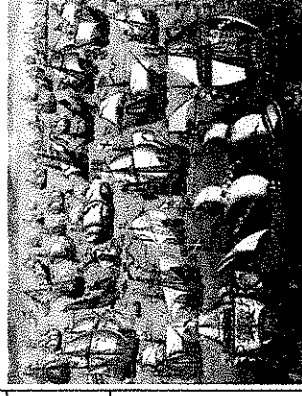
Timeline of events: Elizabethan England	
1.	1558- Elizabeth I is crowned Queen of England
2.	1559- Elizabeth implemented her religious settlement
3.	1568- Mary, Queen of Scots flees to England from Scotland
4.	1569- The Revolt of the Northern Earls to place Mary, Queen of Scots, on the throne.
5.	1570- Pope Pius V excommunicates Elizabeth from the Catholic Church
6.	1571- The Ridolfi Plot to place Mary, Queen of Scots on the throne
7.	1577-80- Francis Drake circumnavigates the world
8.	1583- The Throckmorton plot to place Mary, Queen of Scots on the throne
9	1585- All Catholic priests are ordered to leave the country
10	1586- The Babington plot to place Mary, Queen of Scots on the throne
11	1587- Mary, Queen of Scots is executed
12	1588- Philip II of Spain launches the Armada
13	1594- Shakespeare publishes his first play
14	1603- Death of Elizabeth

Key words

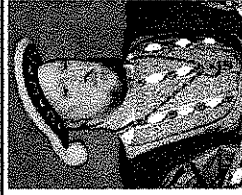
1	Catholic	a member of the Roman Catholic Church
2	Protestant	Christian religion which broke away from the Catholic Church
3	Heretic	Someone whose religious beliefs go against the teachings of the Church
4	Excommunicated	A severe punishment, imposed by the Pope, expelling people from the Catholic Church
5	Jesuit	Catholic missionary Priest whose aim was to convert people to Catholicism
6	Papacy	The system of Church government ruled by the Pope
7	Reformation	A Christian movement in 16th century Europe which broke away from Catholicism and the authority of the Pope
8	Counter Reformation	the movement in the Roman Catholic Church following the Reformation
9	Act of Supremacy	Made Elizabeth supreme governor of the Church of England
10	Act of Uniformity	Established the appearance of churches and the structure of services
11	Puritans	A group of Protestants who wanted to remove all Catholic practices from the Church of England
12.	Armada	Spanish word meaning naval fleet
13.	New World	The name given to North and South America in the 16th century
14.	Vagabonds	Wandering beggars who often turned to crime.



Key individuals					
Francis Drake	Mary Queen of Scots	Henry VIII	Anne Boleyn	Philip of Spain	Mary I
Explorer, pirate and privateer.	Elizabeth's Catholic cousin who was Queen of Scotland	Elizabeth's father	Elizabeth's mother who was executed by Henry VIII	King of Spain who launched the Spanish Armada against Elizabeth	Elizabeth's Catholic sister, was Queen before Elizabeth
					Francis Walsingham
					Elizabeth's spy master



Timeline	
1. 1485-1509	Henry VII is king
2. 1509-1547	Henry VIII is king
3. 1547-1553	Edward VI is king
4. 1553-1558	Mary I is queen
5. 1558-1603	Elizabeth I is queen
6. 22nd August 1485	Battle of Bosworth took place, ending with Henry crowned as the new king.
7. 1509	Henry VIII marries Catherine of Aragon
8. 1516	Mary, Henry's first child is born
9. 1533-34	Henry breaks with Rome and creates the church of England
10. 1533	Henry Divorces Catherine and marries Anne Boleyn
11. 17th September 1533	Elizabeth is born— Henry VIII's second child
12. 1536	Dissolution of the monasteries begins
13. 19th May 1536	Anne Boleyn is beheaded
14. 30th may 1536	Henry VIII marries Jane Seymour
15. 1537	Edward is born Henry's third child
16. 1537	Jane Seymour dies
17. 1540	Henry marries Ann of Cleves but the marriage is annulled
18. 1540	Henry marries Catherine Howard
19. 1542	Catherine Howard is executed
20. 1543	Catherine Parr becomes Henry's sixth wife



Key words	
1. Monarch	the King or Queen
2. restored	return something to the way it was before
3. Dynasty	people in the same family who have influence
4. Beheaded	to have your head cut off
5. Protestant	a Christian religion focussed on the Bible
6. Regency Council	someone who rules the country when the monarch is too young
7. War of the Roses	Battle for power between the House of York (white rose) and House of Lancaster (red rose)
8. Reformation	Reformation, also called Protestant Reformation, the move of part of the church away from the authority of the Pope. Its greatest leaders undoubtedly were Martin Luther and John Calvin.
9. Dissolution of the monasteries	The closure of English Monasteries by Henry VIII in 1536-1540. Monasteries were run by the catholic church and were homes for Monks and Nuns
10. Heir	A person who is next in line to the throne

Key Individuals

1. Martin Luther	A German priest whose <i>Ninety-Five Theses</i> began the Protestant reformation in 1517.
2. Thomas Cromwell	He helped the King in breaking from Rome and establishing his own Church in England, with Henry as Supreme Head of the Church. He had a large role in the Dissolution of the Monasteries from 1536 onwards. However, he fell out of favour following the disastrous Anne of Cleves marriage and was executed in 1540.
3. King Richard III	Richard was King of England and Lord of Ireland from 1483 until his death in 1485. He was the last king of the House of York and the last of the Plantagenet dynasty.
4. Lady Jane Grey	She was the great grand-daughter of Henry VII and named by Edward to be his successor to the throne of England. She became known as the 'nine day queen'
5. Pope Clement VII	Pope who refused Henry's request for a divorce
6. Cardinal Wolsey	Henry VIII's most powerful minister. But he fell out of favour for not being able to get the Pope to grant Henry's divorce from Catherine of Aragon.

Timeline	
1.	1497 John Cabot voyaged to the coast of North America under the commission of King Henry VII.
2.	1577-1580 Francis Drake's circumnavigation of the globe.
3.	1607 Foundation of the British colony at Jamestown in America.
4.	1608 Founding of the East India Company.
5.	1620 Pilgrim father's land in America.
6.	1733 Boston Tea Party.
7.	1750 The French surrendered in Quebec—a British victory in Canada.
8.	1776 American Declaration of Independence.
9.	1807 On 25th March the Abolition of the Slave Trade Act entered the statute books. The Act made it illegal to engage in the slave trade throughout the British colonies, trafficking between the Caribbean islands continued, regardless, until 1811.
10.	1833 Slavery Abolition Act, abolished slavery in most British colonies, freeing more than 800,000 enslaved Africans in the Caribbean and South Africa as well as a small number in Canada. It received Royal Assent on August 28, 1833, and took effect on 1st August 1834.
11.	1837 Queen Victoria ascends to the throne in Britain.
12.	1839-1860 Opium Wars - two wars which were waged between the China and Western powers in the mid-19th century.
13.	1853 Scottish explorer David Livingstone managed to cross Africa.
14.	1901 Queen Victoria dies on 22nd January.
15.	1902 & 1911 Delhi Durbar was an Indian imperial-style mass assembly organized by the British at Coronation Park, Delhi, India, to mark the succession of an Emperor or Empress of India.
16.	1911 Australian independence.
17.	1947 Indian independence.
18.	1948 Empire Windrush arrives at Tilbury Docks in London.
19.	2018 Windrush scandal breaks in Britain—Windrush migrants and their descendants were wrongly detained or deported.

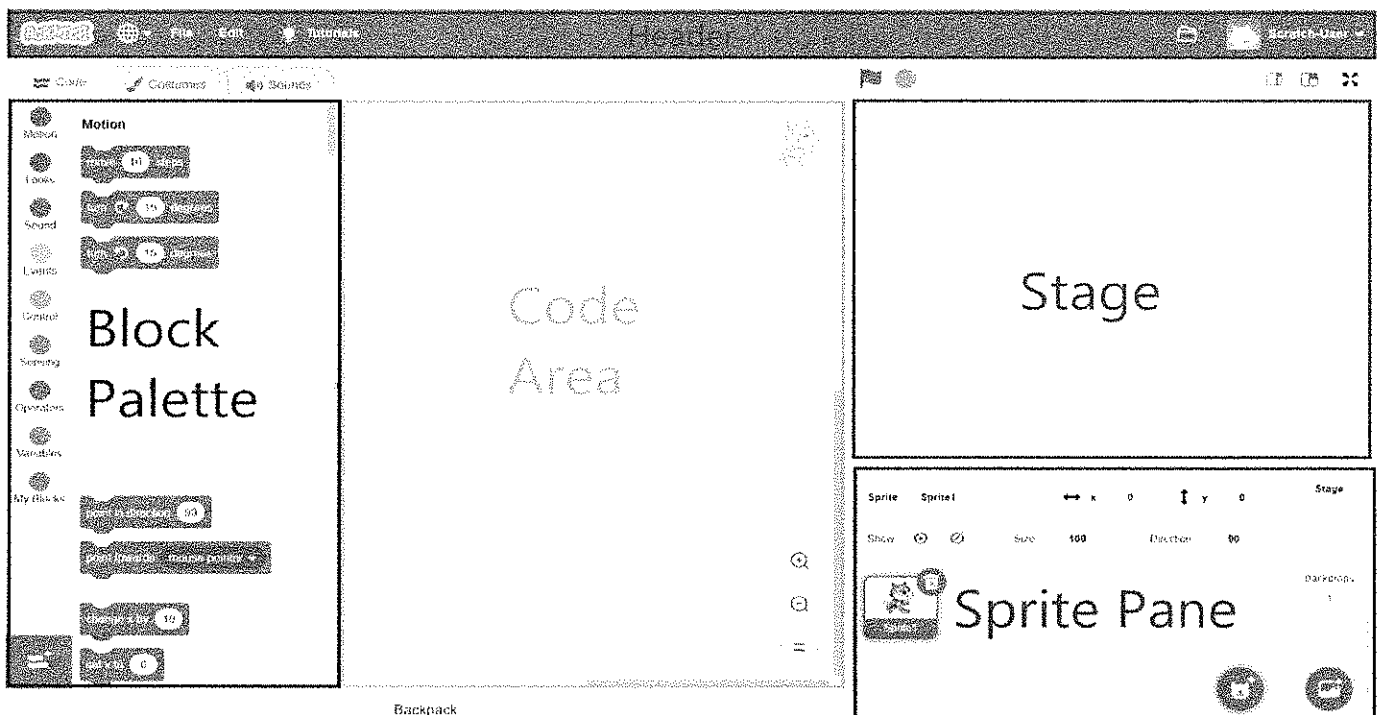
Key places	
1.	Virginia On the north-eastern coast of America. Raleigh attempted to establish a colony here at Roanoke in 1587, and Jamestown was successfully established here.
2.	India Known as 'the Jewel in the Crown' because of its central role in the British empire. Initially seen as an ideal stop on route to China, India itself became a major trading partner of Britain's.
3.	Australia Britain's most remote colony, initially used as a penal colony!
4.	Canada Initially this was a French colony until the Seven Years' War 1756-1763.
5.	Africa Britain's colonies within Africa spread right from the northern coast to the southern tip of the continent.
6.	Caribbean Mainly used by the British for profitable plantations instead of settlements. Millions of slaves were shipped from Africa to work on these plantations.
7.	Britain A small island nation, which throughout the 1600s until the 1900s colonised vast proportions of the world.
8.	America The British and other European continued to colonise America throughout the 17th century onwards, expanding westwards across what is now the USA.

Key words	
1.	Empire An extensive group of states or countries ruled over by a single monarch, or a sovereign state.
2.	Colonialism The policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically.
3.	Import Bring (goods or services) into a country from abroad for sale.
4.	Export Send (goods or services) to another country for sale.
5.	Military The armed forces of a country.
6.	Exploration The action of exploring an unfamiliar area.
7.	Revolution A forcible overthrow of a government or social order, in favour of a new system.
8.	Representation Being able to elect officials to represent you in a government.
9.	Philosophy The study of the fundamental nature of knowledge, reality, and existence, especially when considered as an academic discipline.
10.	Tax A compulsory contribution to state revenue, levied by the government on workers' income and business profits, or added to the cost of some goods, services, and transactions.
11.	Aborigines An aboriginal inhabitant of Australia. A person, animal, or plant that has been in a country or region from earliest times.
12.	Penal Colony A settlement used to exile prisoners and separate them from the general population by placing them in a remote location, often an island or distant colonial territory.
13.	Imperialism A policy of extending a country's power and influence through colonization, use of military force, or other means.
14.	Trade The action of buying and selling goods and services.
15.	East India Company A British company formed to trade in the Indian Ocean region, initially with the East Indies (India and South East Asia), and later with China.

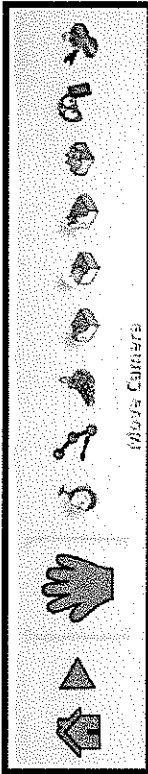
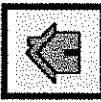
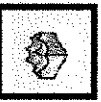
Key people	
1.	Pocahontas Daughter of a Native American chief, who married an English colonist.
2.	Sir Francis Drake British explorer—famed for his involvement in the Spanish Armada and for circumnavigating the globe.
3.	Sir Walter Raleigh British explorer—known for establishing the British colony at Roanoke.
4.	Henry Hudson English explorer, most famous for his exploration of north-east America and Canada.
5.	John Cabot Italian navigator and explorer, his 1497 voyage is the earliest European exploration of the north coast of America.
6.	John Smith English soldier, explorer, colonial governor, Admiral of New England, and author. He played an important role in the establishment of the colony at Jamestown, Virginia.
7.	Queen Elizabeth Queen between 1558 and 1603, oversaw an early age of British piracy and exploration.
8.	Queen Victoria Queen between 1837 and 1901. Ruled over Britain when its empire was at its largest.
9.	Mahatma Gandhi Campaigned for Indian independence, believed in peaceful protest.
10.	Captain Cook British explorer who claimed Australia for the British empire.
11.	Cathy Freeman The first Australian aboriginal to compete in the Olympic games.
12.	Robert Clive Known as Clive of India, he was the first British Governor of the Bengal Presidency.
13.	James Wolfe Remembered for his victory in 1759 over the French at the Battle of the Plains of Abraham in Quebec as a major general.

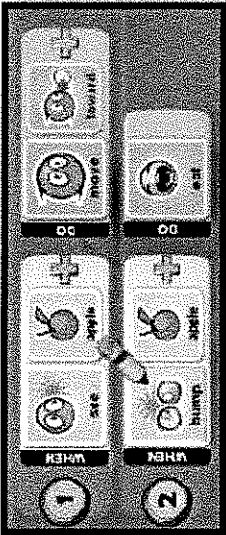
Year 7 Computing All Saints' Absolutes: Advanced Block based Programming

1	Sequence	One of the three basic programming constructs. Instructions that are carried one after the other in order.
2	Selection	One of the three basic programming constructs. Instructions that can evaluate a Boolean expression and branch off to one or more alternative paths.
3	Iteration	One of the three basic programming constructs. A selection of code that can be repeated either a set number of times (count-controlled) or a variable number of times based on the evaluation of a Boolean expression (condition-controlled).
4	Variable	A value that can change depending on conditions or information passed to the program.
5	Boolean expression	An algebraic expression which has a Boolean value.
6	Comparison operator	Used to compare two expressions.
7	Computer bug	Code that causes your computer to behave in an unexpected way.
8	Resilience	The capacity to recover quickly from difficulties.
9	Subroutine	A block of code within a program that is given a unique, identifiable name. Supports code reuse and good programming technique.
10	Decomposition	Breaking down a problem into smaller, more manageable parts in order to make the problem easier to solve.
11	List	A data structure that allows multiple pieces of data under a single name.
12	Data structure	A way of organising and managing data in a programming language that ideally enables efficient access and modification of the data.



Year 7 Computing All Saints' Absolutes: Kodu

The Kodu Game Developer Toolbar					
					
<i>Move Camera</i>					
	This button is the home button and will bring up the home menu. In here you can save and load your work.		This button is the play game button. This brings your game to life so that you can test it.		This is the move camera button. This button will let you change the camera angles in the game to make editing easier.
	This is the object tool. This lets you add objects such as players and features to your game.		This is the path tool. The path tool is used to create a line for an object to follow.		This is the ground brush tool. This can be used to create your world.
	This is the up and down tool. With this tool you can create hills or valleys.		This is the flatten tool. This tool can make the ground level for your objects to move across.		This is the roughen tool. You can create spiky or hilly ground with this tool. This helps to make your world more interesting.
	This is the water tool. With this tool you can add, remove or tint water.		This is the delete tool. This tool can be used to remove objects from your world.		This is the change world settings tool. You can use this tool to environment of the world that you are working in.

Coding using Kodu		Useful Links	
When you have setup your world in Kodu you will start to learn how to create actions for your object. The image below shows two actions that have been assigned to one object. In row 1 we can see that when my object sees an apple, it moves towards it automatically. In row 2 we can see that when the object bumps into the apple, they eat it.		https://www.kodugamelab.com/ - This is where you can download a free copy of the Kodu software should you wish to continue your learning at home. https://www.kodugamelab.com/resources/ - This is a list of educational tutorials that you can work through to improve your knowledge of Kodu. https://code.org/learn - This is a website that has many other VPL activities that you could work through to improve your understanding of programming.	
			

Keywords

Congruent: The same

Area: Space inside a 2D object

Perimeter: Length around the outside of a 2D object

π (π): The ratio of a circle's circumference to its diameter

Perpendicular: At an angle of 90° to a given surface

Formula: A mathematical relationship/ rule given in symbols E.g. $b \times h$ = area of rectangle/ square

Infinity (∞): A number without a given ending (too great to count to the end of the number) — never ends

Sector: A part of the circle enclosed by two radii and an arc

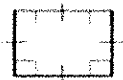
If all the sides and angles are the same, it is a **regular** polygon

Polygons

- 3 - Triangle
- 4 - Quadrilateral
- 5 - Pentagon
- 6 - Hexagon
- 7 - Heptagon
- 8 - Octagon
- 9 - Nonagon
- 10 - Decagon

Properties of Quadrilaterals

Square



All sides equal size
All angles 90°

Opposite sides are parallel



Parallelogram

Opposite sides are parallel

Opposite angles are equal

Co-interior angles

Rectangle



All angles 90°

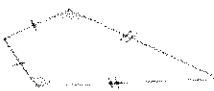
Opposite sides are parallel



Trapezium

One pair of parallel lines

Kite



No parallel lines

Equal lengths on top sides

Equal lengths on bottom sides

One pair of equal angles

Rhombus

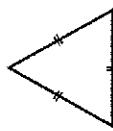


All sides equal size

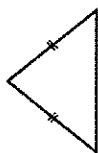
Opposite angles are equal

Properties of Triangles

By Side



Equilateral Triangle
has three equal sides



Isosceles Triangle
has two equal sides



Scalene Triangle
has no equal sides

By Angle



Acute Triangle
has three angles $< 90^\circ$



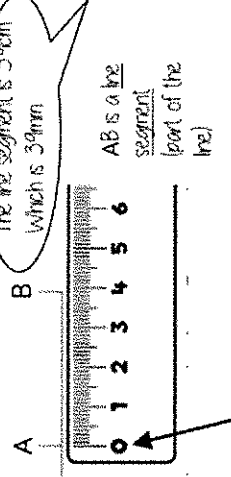
Right Triangle
has one angle = 90°



Obtuse Triangle
has one angle $> 90^\circ$

Draw and measure line segments

Conversions: $1\text{m} = 100\text{mm}$, $1\text{m} = 100\text{cm}$



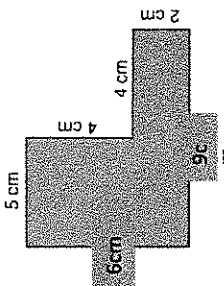
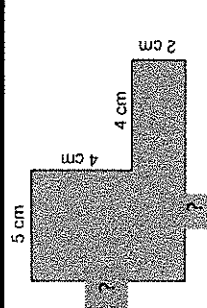
Make sure the start of the line is at 0.

To find the perimeter of compound shapes you need to:

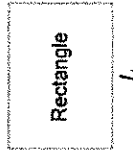
Use what you know to find any missing sides.

Add all the sides together.

$$5+4+4+2+9+6 = 30\text{cm}$$

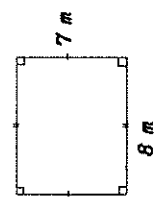


Area of a rectangle



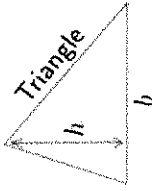
$$\text{Area} = \text{length} \times \text{width} = L \times W$$

Example: Find the area of the rectangle



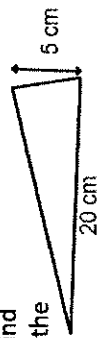
$$A = L \times W \\ = 7 \times 8 = 56\text{m}^2$$

Area of a triangle



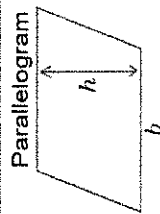
$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height} = \frac{1}{2}bh$$

Example: Find the area of the triangle



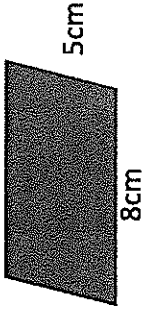
$$A = \frac{1}{2}bh \\ = \frac{1}{2} \times 20 \times 5 = 50\text{m}^2$$

Area of a parallelogram



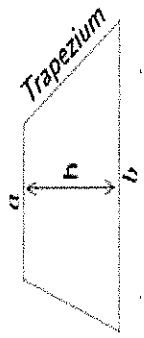
$$\text{Area} = \text{base} \times \text{height} = bh$$

Example: Find the area of the parallelogram

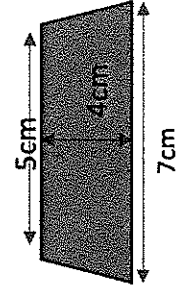


$$\text{Area} = bh \\ = 8 \times 5 \\ = 40\text{cm}^2$$

Area of a trapezium



$$\text{Area} = \frac{1}{2}(a+b) \times h$$



$$\text{Area} = \frac{1}{2}(a+b) \times h \\ = \frac{1}{2} \times (5+7) \times 4 = 24\text{cm}^2$$

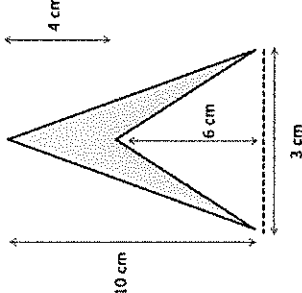
Example: Find the area of the trapezium

Area is the total surface of a shape or space.

Step by step guide:

1. Write out the formula
2. Substitute the values from the question
3. Work out the answer
4. Add the correct units

How can we find the area of this shape?



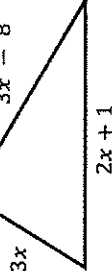
$$\text{Big Triangle Area} = \frac{10 \times 10}{2} \\ = 50\text{ cm}^2$$

$$\text{Small Triangle Area} = \frac{3 \times 4}{2} \\ = 6\text{ cm}^2$$

$$\text{Total Area} = 50 - 6 = 44$$

The total perimeter of the shape below is 53 cm. Find the value of x and hence the length of the longest side.

$$\text{Total perimeter} \\ 3x + 3x + 8 + 2x + 1 \\ = 8x + 12$$



$$\text{Solving} \\ 8x + 12 = 53 \\ 8x = 41 \\ x = 5.125$$

$$\text{Longest Side} \\ 2x + 1 = 10.25$$

Keywords

Polygon: A 2D shape made with straight lines
Scalene triangle: a triangle with all different sides and angles
Isosceles triangle: a triangle with two angles the same size and two angles the same size
Right-angled triangle: a triangle with a right angle
Frequency: the number of times a data value occurs
Sector: part of a circle made by two radii touching the centre
Rotation: turn in a given direction
Protractor: equipment used to measure angles
Compass: equipment used to draw arcs and circles

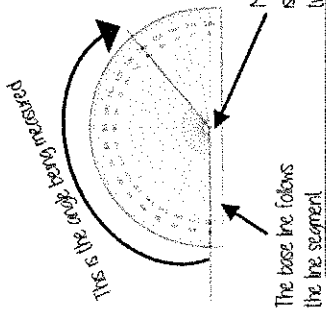
Parallel lines

Straight lines that never meet
(Have the same gradient)

Perpendicular lines

Straight lines that meet at 90°

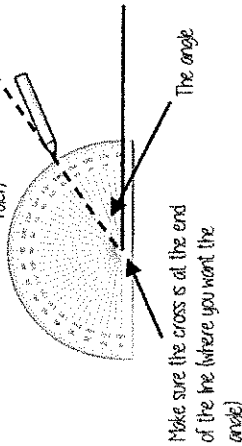
Measure angles to 180°



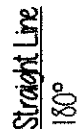
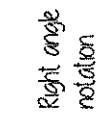
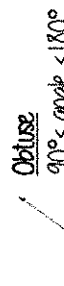
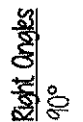
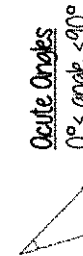
Draw angles up to 180°

Draw a 35° angle

Make a mark at 35° with a pencil
And join to the angle point (use a ruler)



Classify angles



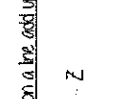
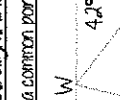
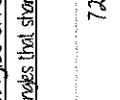
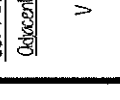
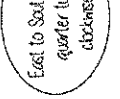
Letter and labelling convention

The letter in the middle is the angle
The arc represents the angle



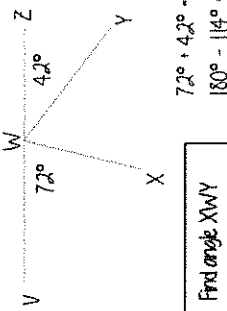
Angle Notation: three letters ABC
This is the angle at B = 113°
Line Notation: two letters EC
The line that joins E to C

Angles as measures of turn

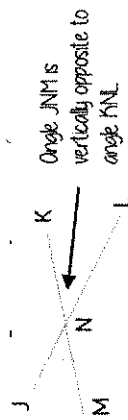


Sum of angles on a straight line

Adjacent angles that share a common point on a line add up to:



Vertically opposite angles



Vertically opposite angles are the same

Other angle rules still apply
Look for straight line sums and angles around a point



Form equations with information from diagrams

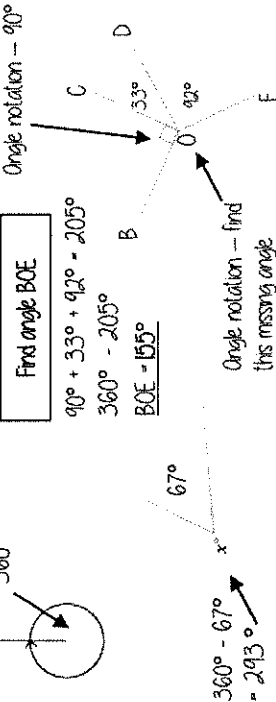
$$2x - 12 = 42$$

$$2x = 54$$

$$x = 27^\circ$$

Sum of angles at a point

The sum of angles around a point is 360°



Keywords

Vertically Opposite: angles formed when two or more straight lines cross at a point

Interior Angles: angles inside the shape

Sum: total, add all the interior angles together

Convex Quadrilateral: a four-sided polygon where every interior angle is less than 180°

Concave Quadrilateral: a four-sided polygon where one interior angle exceeds 180°

Polygon: a 2D shape made with straight lines

Scalene triangle: a triangle with all different sides and angles

Isosceles triangle: a triangle with two angles the same size and two angles the same size

Right-angled triangle: a triangle with a right angle

Properties of Quadrilaterals

Rectangle

4 right angles and opposite sides equal



Square

4 right angles and 4 equal sides



Parallelogram

Two pairs of parallel sides and opposite sides equal



Rhombus

Parallelogram with 4 equal sides



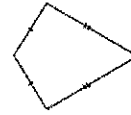
Trapezium

Two sides are parallel



Kite

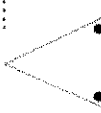
Two pairs of adjacent sides of the same length



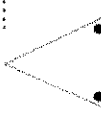
Properties of Triangles

The angles in a triangle add up to 180°

$$w + x + y = 180^\circ$$



Equilateral - all three sides are equal, and all three equal angles are 60°



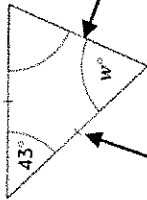
Isosceles - two sides are equal, and their two base angles are equal



Scalene - All sides and angles are different sizes.

Sum of angles in triangles

Sum of interior angles in a triangle = 180°



Look at triangle notation

This indicates an isosceles triangle

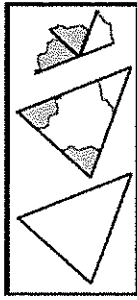
$$\therefore 180 - 43 = 137$$

$$137 \div 2 = 68.5^\circ$$

A triangle can only have ONE right angle

Have a go!

Tearing the corners from triangles forms a straight line which is therefore 180°



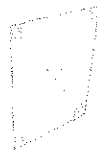
Sum of angles in quadrilaterals

Sum of interior angles in a quadrilateral = 360°

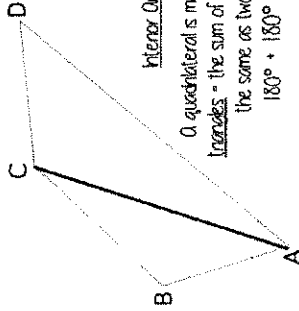


Convex Quadrilateral

Concave Quadrilateral



Interior angles are those that make up the perimeter (outline) of the shape

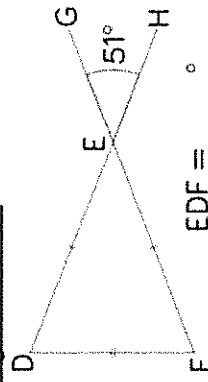


Interior Angles

A quadrilateral is made up of two triangles - the sum of interior angles is the same as two triangles $180^\circ + 180^\circ = 360^\circ$

Angle Problems

Split up the problem into chunks and explain your reasoning at each point using angle notation



$$EDF = \underline{\hspace{1cm}}^\circ$$

1. Angle $DEF = 51^\circ$ because it is a vertically opposite angle $DEF = GEH$

2. Triangle DEF is isosceles (triangle notation) $\therefore EDF = EFD$ and the sum of interior angles is 180°
 $180^\circ - 51^\circ = 129^\circ$
 $129^\circ \div 2 = 64.5^\circ$

3. Angle $EDF = 64.5^\circ$

Keep working out clear and notes together

Keywords

Probability: likelihood of an event happening

Bias: a built-in error that makes all values wrong (unequal) by a certain amount, e.g. a weighted dice

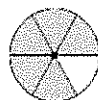
Fair: there is zero bias, and all outcomes have an equal likelihood

Random: something happens by chance and is unable to be predicted

Sample space — for single events



A sample space for rolling a six-sided die is $S = \{1, 2, 3, 4, 5, 6\}$

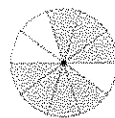


A sample space for this spinner is $S = \{\text{Pink, Blue, Yellow}\}$

You only need to write each element once in a sample space diagram

- A sample space represents a possible outcome from an event
- They can be interpreted in a variety of ways because they do not tell you the probability

Probability of a single event



Probability = number of times event happens / total number of possible outcomes

$$P(\text{Blue}) = \frac{4}{10} \leftarrow \text{There are 4 blue sectors} \\ = \frac{2}{5} \leftarrow \text{There are 10 sectors overall}$$

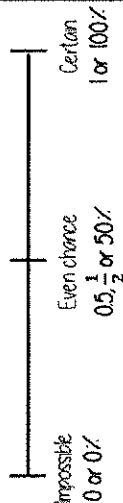
Probability notation $P(\text{event})$

Probability can be a fraction, decimal or percentage

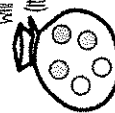
$$\frac{4}{10} = \frac{40}{100} = 0.40 = 40\%$$

Probability is always a value between 0 and 1

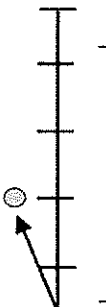
The probability scale



The more likely an event, the further up the probability it will be in comparison to another event (It will have a probability closer to 1)



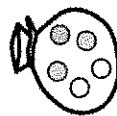
There are 2 pink and 2 yellow balls, so they have the same probability



There are 5 possible outcomes. So 5 intervals on this scale, each interval value is $\frac{1}{5}$

Sum of probabilities

Probability is always a value between 0 and 1



The probability of getting a blue ball is $\frac{1}{5}$
 $\therefore$ The probability of NOT getting a blue ball is $\frac{4}{5}$

The sum of the probabilities is 1

The table shows the probability of selecting a type of chocolate

Dark	Milk	White
0.15	0.35	

$$P(\text{white chocolate}) = 1 - 0.15 - 0.35 = 0.5$$



Sample Spaces

Sample space is a term used in mathematics to mean **all possible outcomes**, and can be used to find probabilities. Here is a sample space showing all possible outcomes for a coin being flipped and a dice being rolled at the same time.

		Number on dice					
Coin	Heads	H1	H2	H3	H4	H5	H6
	Tails	T1	T2	T3	T4	T5	T6

This table shows that there are 12 possible outcomes.

Probability of getting a Heads and number 5 = $\frac{1}{12}$

Experimental Probability — Found by repeating an experiment and observing the outcomes. Calculated by:

$$= \frac{\text{Numbers of successes}}{\text{Number of trials}}$$

Expected Frequency — how often you expect something to happen.

$$\text{Calculated by: } = \text{probability} \times \text{number of trials}$$

Mutually Exclusive Events — events that cannot happen at the same time.

e.g. traffic lights showing red and green.

Independent events — one event happening has no effect on another event taking place.

Keywords

Quadrant: four quarters of the coordinate plane.

Coordinate: a set of values that show an exact position

Horizontal: a straight line from left to right (parallel to the x axis)

Vertical: a straight line from top to bottom (parallel to the y axis)

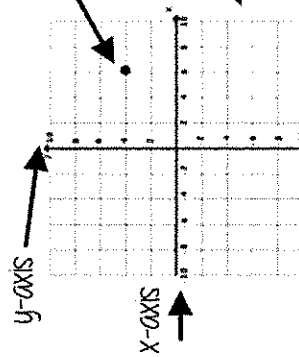
Origin: (0,0) on a graph. The point the two axes cross

Parallel: Lines that never meet

Gradient: The steepness of a line

Intercept: Where lines cross

Coordinates in four quadrants



Coordinate (x, y) (6, 4)

From the origin this coordinate is 6 places along the positive x axis and 4 places up the positive y axis

(x, y)

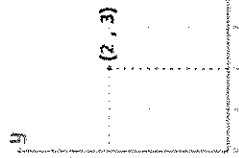
Always the position on the x axis first

Always the position on the y axis second

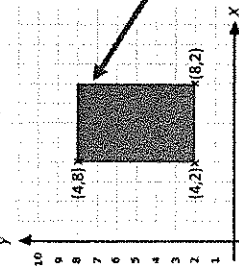
(0, a) Will be always be a point on the y axis (a can be any number)

(a, 0) Will be always be a point on the x axis (a can be any number)

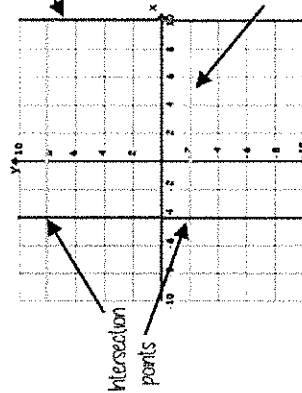
Along the Corridor and up the Stairs



Write down the missing coordinate pair that complete this rectangle.



Lines parallel to the axes



All the points on this line have a x coordinate of 10

Lines parallel to the y axis take the form $x = a$ and are vertical

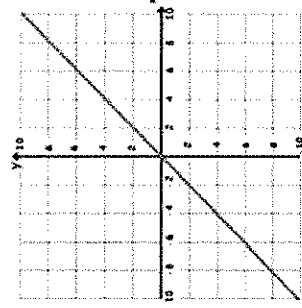
Lines parallel to the x axis take the form $y = a$ and are horizontal

All the points on this line have a y coordinate of -2

'a' can be ANY positive or negative value including 0

(2, 4)
y-coordinate
x-coordinate

Recognise and use the line $y=x$



This means the x and the y coordinate have the same value

Examples of coordinates on this line (0, 0) (-3, -3) (8, 8)

The axes scale is important – if the scale is the same $y = x$ will be a straight line at 45°

Quiz 5.1 - Weather

In the north, it is sunny.	Dans le nord, il y a du soleil.
In the south, it is windy.	Dans le sud, il y a du vent.
In the morning, it's raining.	Le matin, il pleut.
In the evening, it's nice weather.	Le soir, il fait beau.
On Tuesday afternoon, it's cold.	Mardi après-midi, il fait froid.

Quiz 5.2 – Hobbies in different types of weather

When it's hot, I play tennis.	Quand il fait chaud, je joue au tennis.
When it's raining, I watch a film at my house .	Quand il pleut, je regarde un film chez moi .
When it's sunny, I go to the park.	Quand il y a du soleil, je vais au parc.
When it's snowing, I play in the garden.	Quand il neige, je joue dans le jardin.
When it's windy, I like to do shopping.	Quand il y a du vent, j'aime faire du shopping.

Quiz 5.3 – Technology gadgets and activities

At my house, I have a computer.	Chez moi, j'ai un ordinateur.
I like to share photos with my friends.	J'aime partager des photos avec mes copains.
I don't like to send texts.	Je n'aime pas envoyer des textos.
I would like to listen to music in the evening.	Je voudrais écouter de la musique le soir.
I can download songs on my phone.	Je peux télécharger des chansons.
I can't watch a film on my tablet.	Je ne peux pas regarder un film sur ma tablette.

End of half-term checklist			
I can...	☹	☺	😊
say what the weather is like in different places			
say what activities I do in different types of weather			
talk about technology gadgets I have and would like			
talk about what activities I do with technology			
give opinions on how technology is used			

90 word task

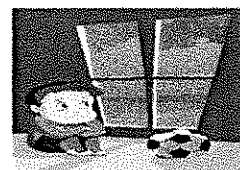
Vous écrivez un article concernant des activités et des sports. Mentionnez:

- les activités que vous aimez. *The activities that you like.*
- les activités que vous n'aimez pas. *The activities that you don't like.*
- les activités et la météo. *Activities and the weather.*
- les sports dans le futur. *Sports in the future.*

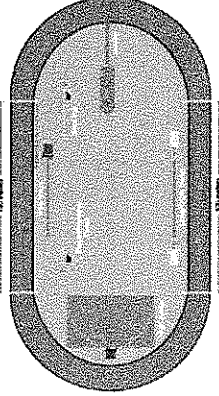
Je suis très sportif. Au collège je joue au foot et au rugby avec mes copains. C'est super, même si c'est un peu fatigant. Le weekend je préfère aller au cinema et regarder un film parce que c'est amusant. Cependant je n'aime pas faire du cyclisme car c'est assez ennuyeux. Quand il y a du soleil je joue au tennis ou je suis avec mon chien dans le jardin car c'est cool. Cependant, quand il pleut, je peux écouter de la musique et bloguer sur mon ordinateur car c'est relaxant. Dans le futur je voudrais faire de l'équitation vu que c'est génial et j'adore les chevaux. Je voudrais aussi faire du ski en France.	I am very sporty. At school, I play football and rugby with my friends. It is great even if it's a bit tiring. The weekend, I prefer to go to the cinema and watch a film because it is fun. However, I do not like to do some cycling because it's quite boring. When there is some sun, I play at tennis or I am with my dog in the garden because It is cool. However, When it rains, I can listen to some music and blog on my computer because it's relaxing. In the future, I would like do some horse riding because it is great and I love horses. I would also like to do some skiing in France.
Je suis très sportif. Au collège je joue au foot et au rugby avec mes copains. C'est super, même si c'est un peu fatigant. Le weekend je préfère aller au cinema et regarder un film parce que c'est amusant. Cependant je n'aime pas faire du cyclisme car c'est assez ennuyeux. Quand il y a du soleil je joue au tennis ou je suis avec mon chien dans le jardin car c'est cool. Cependant, quand il pleut, je peux écouter de la musique et bloguer sur mon ordinateur car c'est relaxant. Dans le futur je voudrais faire de l'équitation vu que c'est génial et j'adore les chevaux. Je voudrais aussi faire du ski en France.	I am very sporty. At school, I play football and rugby with my friends. It is great even if it's a bit tiring. The weekend, I prefer to go to the cinema and watch a film because it is fun. However, I do not like to do some cycling because it's quite boring. When there is some sun, I play at tennis or I am with my dog in the garden because It is cool. However, When it rains, I can listen to some music and blog on my computer because it's relaxing. In the future, I would like do some horse riding because it is great and I love horses. I would also like to do some skiing in France.

Key skills

1. Confidently communicate about hobbies and technology in speaking and writing
2. Justify opinions with multiple 'because' connectives
3. Answer comprehension questions in English and French through listening and reading
4. Confidently and accurately use infinitive constructions
5. use a wide range of opinion phrases and cross-contextual vocabulary

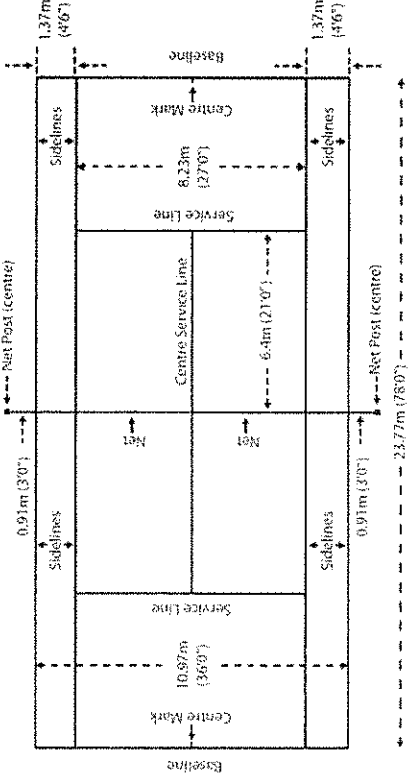


ATHLETICS

<u>Core skills:</u> Core skills that will need to be performed and understood:	<u>Advanced Skills- Track/Jumping/Throwing.</u>	<u>Decision making and tactical awareness – Track/Jumping/Throwing</u>	<u>Rules and Regulations</u>
Track -Short distant events *100m and 200m -Long distance events *800m and 1500m -Starting - *Standing start with focussing on getting into a low drive position. -Finishing - *Understand to sprint over the finish line to maintain speed. -Driving legs and arms 	-Crouching sprint starts with correct hand placement. -Focus on picking knees up and developing stride length & stride frequency. -Relay - * To understand rules regarding sprint relay and adhere to them. -Hitting maximal speed at take-off point to increase distance -Triple jump *Students to use correct technique efficiently	Changing and adapting your race tactics focussing on pacing. Positioning in the field, where to run in the pack during long distance events Awareness of the rules and regulations of the event and their application (including officials' commands / signals) To understand components of fitness involved in longer distance races. To understand components of fitness involved in short distance races. Appropriate distance/number of steps chosen for run up during long jump and triple jump events,	Awareness of the rules and regulations of the sport and their application: ➤ Understand the application of on your marks, get set, go. ➤ Identify lanes of the track and recognise the sprint events where you must stay within your specific lane. ➤ Always mark from the closest contact point from the take-off board ➤ Identify when a no throw occurs in the throw events ➤ Understand that the foot cannot go over the take-off board during lung and triple jump 
Jumping Long jump -Flight -Landing - * 2-foot landing -Take off - * 1 foot take off 	History of athletics The modern Olympics were started in 1896 by Pierre de Coubertin a French educator and historian. He designed the five colour rings that are used to represent the Olympic Games today. The rings stand for North and South America, Africa, Asia, Europe, and Australia.		
Throwing – Javelin/Shotput/Discus -Grip/preparation -action -Initial stance - *Standing throws to develop accuracy and release -Recovery phase  			Key vocabulary: Pacing Power Acceleration Speed Endurance Technique Accuracy Drive Flight Rotation Explosive Cardiovascular Respiratory

Cricket			
<u>Core Skills</u>	<u>Advanced Skills</u>	<u>Decision making and tactical awareness</u>	<u>Rules and Regulations</u>
Core skills that will need to be performed and understood <u>Batting</u> *Defensive shots off front foot *Footwork *Off or on drive  <u>Bowling</u> *Bowling with a straight arm.  <u>Fielding</u> *Long barrier *Pick up and throw underarm and overarm. 	<u>Batting</u> *Pull shot *Cut shot *Sweep shot <u>Bowling</u> *Bowling consistently with accuracy and demonstrating variation in speed and the length of bowl. <u>Fielding</u> *Pick up and throw at the stumps with accuracy.	* Selection of appropriate shot * Awareness and application of team strategies/tactics * Principals of attack and defence * Applying different systems of play in different situations e.g. switching bowling styles to keep the opposition guessing * Awareness of the rules and regulations of the sport and their application	* Awareness of the rules and regulations of the sport and their application ➤ The bowler must bowl the ball with a straight arm for it to be a legal delivery. ➤ The batter will be given out if the following happens: the ball hits the stumps after the bowler bowls the ball, the batter hits the ball and a fielder catches the ball without the ball bouncing, the batter hits the stumps with their bat when attempting a shot. ➤ The bowler must bowl from behind the crease line. 
			Key Vocab Bowler, batter, fielder, catch, throw, footwork, defensive shot, long barrier, accuracy, speed, length.

Tennis

Core Skills	Advanced Skills	Decision making and tactical awareness	Rules and Regulations
Pupils will learn to choose, combine and perform basic tennis skills fluently and with accuracy and control.  - Ground Strokes - Forehand - Backhand - Serving - Under arm serve - Punch service - Court Positioning - Footwork - Speed - Mobility	- Volley - Forehand - Backhand - Overhead - Forehand Lob - Drop Shot	- Selection of appropriate shot - Identify and recognise similarities in principles of attack and defence tactics - Understanding of positions and roles in attack and defence - Applying tactics in different competitive situations - Applying other plays/tactics to outwit opponent e.g. serve, second serve and volley, intercepting in doubles, disguising your shot, switching positions - Awareness of team strategies/tactics (doubles only) - Pupils should evaluate their own and others. 	* Awareness of the rules and regulations of the sport and their application  Scoring Systems: - Games are scored starting at "love" (or zero) and go up to 40, which is only 4 points. From love, the first point is 15, then 30, then 40, then game point, which wins the game. - Same player serves for the entire game and swaps over after the game has been won by either player. - Before serving the current score should be shared, starting with the servers score first. - If the score is tied at 40 ("40-all"), that is "deuce," which is essentially another word for tie. To break the tie, someone must win two points in a row. - Know court lines for singles and doubles. * Know how to put up a court safety 
Key Vocabulary: ready position, angles, forehand, backhand, smash, overhead, volley, block, serve, staying in the rally, finishing the rally, tactics, game plan, success criteria, officiating/umpiring, captaincy, adjustments/variations, anticipation, fitness			

CHAPTER 5:

TO THE ENDS OF THE EARTH

Knowledge organiser

Key vocabulary	
Holy Spirit	The third person of the Trinity, true God, who Christians believe inspires people.
Pentecost	A Christian festival celebrating the time when the Holy Spirit came down to the apostles; also a Jewish festival known as Shavuot, celebrating the harvest and the giving of the Torah at Mount Sinai.
ruah	A Hebrew word meaning wind or breath; God's Spirit that was breathed in Adam to bring him to full life.
People of God	One of the names of the Church, emphasising the whole community of believers, united by their belief in God, the Father, Son and Holy Spirit.
Body of Christ	One of the names of the Church, emphasising the community of all those who are members of Christ's body through Baptism, with Jesus as their head, working together like one body.
Temple of the Holy Spirit	One of the names of the Church, emphasising the community of all those who are led by God's spirit in their lives, given to them through the sacraments.
Confirmation	The Sacrament of Initiation that completes Baptism and strengthens a person's faith by being sealed with the Holy Spirit as a mature member of the Church.
Fruits of the Spirit	The behaviours and attitudes that are shown by a person who is filled with the Holy Spirit, such as love, joy and kindness.

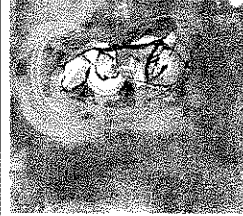
OPTIONS	
Ethical	Christians believe they are guided by the Holy Spirit to show the fruits of the Spirit (such as patience and kindness) in the way they live. Although it is sometimes difficult to ignore the works of the flesh (temptations or weaknesses such as anger or jealousy), Christians aim to follow Jesus' example.
Artistic expression	Life of Jesus Maria: Pentecost shows the apostles as Black Africans, as a way of making Bible stories more meaningful for Black African communities. The painting shows the apostles and Mary joyfully receiving the Holy Spirit in wind and fire. The descent of the Holy Spirit on the apostles and Mary at Pentecost by Elizabeth Wang shows Mary and the apostles, with the light of the Holy Spirit coming from heaven and flames on each person's head. This shows the holiness of the Holy Spirit.
Lived religion	Pentecost is celebrated in different ways around the world, reflecting Christian beliefs and local cultures. For example, red rose petals are scattered to symbolise tongues of fire in Italy, and greenery is used to decorate homes in Poland.

Who is the Holy Spirit?

- The Holy Spirit is the **third person of the Trinity**.
- In the Nicene Creed, the Holy Spirit is described as 'the Lord, the giver of life'.
- Symbols** are used to communicate beliefs about the Holy Spirit. These symbols are often based on **biblical accounts** of the Holy Spirit (e.g. the dove, fire and wind). Some symbols link to **Christian worship and rituals** (e.g. anointing, the hand and water).
- The Holy Spirit gives Christians **seven gifts**, which are freely given through love: wisdom, understanding, counsel, fortitude, knowledge, piety and fear of the Lord.
- A person shows the impact of the Holy Spirit in their life by displaying the **twelve fruits**: love, joy, peace, patience, kindness, generosity, faithfulness, gentleness, self-control, goodness, modesty and chastity.
- St Luke** is believed to have written Luke's Gospel and Acts of the Apostles. He described the importance of the Holy Spirit in the life of Jesus and in establishing the Church community.
- Pentecost** is when the Holy Spirit came to the apostles, filling them with confidence and the ability to speak different languages to spread the Good News. This event is considered to be the birthday of the Church.



The Holy Spirit and Jesus



The Bible shows that the Holy Spirit played an **important role** in Jesus' life and mission:

- Jesus was conceived by the power of the Holy Spirit.
- When Jesus was baptised, the Holy Spirit appeared as a dove.
- In Luke 4:18, Jesus said that God's Spirit had anointed him to do God's work.
- Jesus promised that he would send God's Spirit to the apostles, who had been given the task of spreading the Good News.

The Holy Spirit in the life of the Church

- The Holy Spirit has **guided the Church** from its earliest moments:
- The Holy Spirit helped the apostles to carry out the mission given to them by Jesus.
 - The Holy Spirit remained with the earliest Church communities to give them strength in the face of persecution.
 - The Holy Spirit helped to bring more people into the Church community.
 - The Church community is described as a community of God's people (the People of God); a community like a body, with Jesus as the head (the Body of Christ); and a community filled with the Holy Spirit (the Temple of the Holy Spirit).



The Holy Spirit in the life of individual Christians

Individual Christians can feel the Holy Spirit at work in their lives:

- The Holy Spirit guides people in their **vocation**: their call from God to live a particular life.
- Catholics believe that a person is anointed in the Holy Spirit at Baptism, and sealed in the Holy Spirit at Confirmation.
- At Confirmation, a person celebrates receiving the gifts of the Holy Spirit, which help them to live a Christian life and follow God.

CHAPTER 6:

DIALOGUE AND ENCOUNTER

Knowledge organiser

Key vocabulary	
ecumenical council	In Catholicism, a meeting of the bishops of the worldwide Church at the invitation of the Pope, to decide on matters of the Church.
schism	A split or division within a group.
dogma	An essential belief which becomes a binding teaching in Catholicism.
reform	To make changes to something.
Christian unity	All Christians are united in common beliefs such as the importance of Jesus and his teachings.
ecumenism	The aim of promoting unity among the Christian Churches of the world.

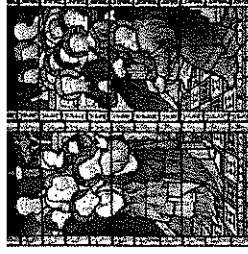
The importance of councils within the Church

- After the Great Commission, as Christianity grew, councils became an important way of **making decisions** that could be shared with the Church and its members to **ensure harmony** in the Church.
- Councils aim to **resolve theological issues** peacefully, and debate matters of faith and morals.
- There have been **21 councils** in total. Some of these councils have established **dogma** that Catholics must follow.



The Council of Jerusalem

- The Council of Jerusalem was the **first council recorded in the Bible**, in Acts 15 and Galatians 2.
- The **apostles** met to decide whether people who were not Jewish (gentiles) needed to become Jews or follow Jewish Law in order to be followers of Jesus.
- The council decided that **gentiles did not need to become Jews or follow Jewish Law** to be Christian.
- In Acts, St Peter confirms that **both Jews and gentiles are chosen by God** and therefore there is no difference between them.
- In Galatians, St Paul explains that all people become brothers and sisters when they believe in Jesus, so the differences between Jews and gentiles do not matter and all can be followers of Christ.
- The Council of Jerusalem is the first example of **church leaders gathering to resolve a difference** that threatens to split the Church and its members.
- Today, the **bishops and the Pope** continue the work of the apostles and call councils as needed. A modern example of an ecumenical council is the **Second Vatican Council**, called in 1962 by Pope John XXIII to try to modernise the Church.



Different Christian denominations

When different views within the Church cannot be peacefully resolved, this can lead to splits and divides (schisms) within the Church. In the past this had led to **different Christian denominations** being founded.

The First Council of Nicaea in AD 325	This was a response to Arianism , which rejected the divinity of Jesus and the Holy Trinity. The council decided that Arianism was incorrect, so the Arians broke away from the main Church.
The Council of Chalcedon in AD 451	This was a response to Nestorianism , which argued that Jesus was a God-inspired man, not God-made-human. The council decided this was incorrect; as the difference could not be resolved, some Christians broke away from the Church.
The Council of Trent in 1545	This was a response to the Reformation , which wanted to reform Catholicism and remove practices the reformers did not agree with, such as selling indulgences. The Council of Trent was part of the Counter-Reformation, which was unsuccessful in stopping the Reformation. This led to some Christians splitting from Catholicism and founding Protestant groups.

Ecumenism

- The ecumenical movement wants to follow in the footsteps of Jesus and reconcile all Christians to bring about Christian unity.
- In his words and actions, **Jesus called for one united Church**, so the movement aims to bring about the Christianity that Jesus hoped for.

What can Christians do to bring about unity?

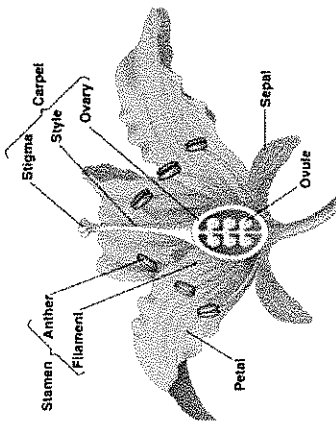
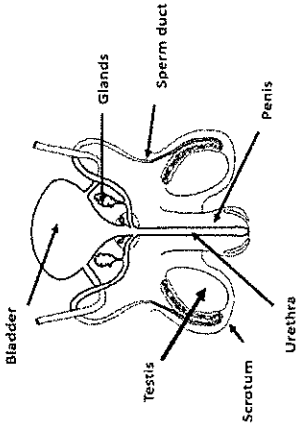
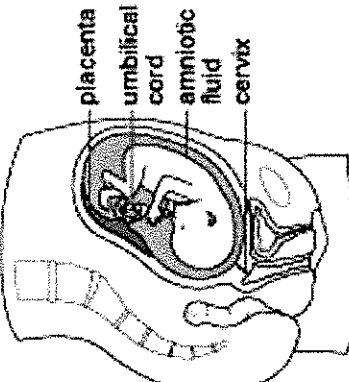
- Christians can put aside their differences and **focus on their similarities**.
- They can remember that they are all connected as part of the **Body of Christ**.
- They can have **discussions and dialogue** to better understand each other.
- They can **pray and worship together**, as in worship there is no room for disagreements.

How do Christians work together to bring about the common good?

- The **World Council of Churches** (a global community of churches) works to bring about ecumenism.
- They **organise projects** that help to distribute resources fairly.
- Their work **highlights shared Christian beliefs**. Focusing on these similarities helps Christians to come together to bring about the common good.



Year 7 Biology 2 - Inheritance

1. <u>Growth & puberty</u> Puberty- When adolescents reach sexual maturity and become capable of reproduction. Hormones- Chemical messengers that travel around the body in the blood, that cause puberty to happen. Male changes • Hair growth on face/chest • Pubic hair • Shoulders broaden • Voice deepens • Growth spurt • Body odour • Penis and testes get bigger • Emotional changes Female changes • Pubic hair • Breasts develop • Periods start • Growth spurt • Body odour • Hips widen • Emotional changes 2. <u>Sexual and asexual reproduction</u> Sexual • Involves 2 parents • Offspring show variation (differences in characteristics), increases survival • Time consuming, as must find a mate Example = humans Asexual • Involves one parent • Offspring are clones (genetically identical) • Much quicker • No variation in population- so could die out from a disease Example = bacteria  3. <u>Plant reproduction</u>  1. Pollen is transferred from the anther to the stigma 2. The pollen makes pollen tubes which grow down the style into the ovary 3. The pollen nucleus fuses with the ovule nucleus 4. The ovule has been fertilised by the pollen 4 and 5. <u>Seed dispersal and germination</u> For fertilisation to take place, the pollen can be transferred by: • Wind • Animals • Water • Explosions Germination is a process in which the seed begins to develop into a new young plant. Three main factors are needed for successful germination: • Oxygen • Water • Warmth 6. <u>Reproductive structure and function</u>  <table><tr><td>Testes</td><td>Where sperm is produced</td></tr><tr><td>Scrotum</td><td>Skin containing the testes</td></tr><tr><td>Urethra</td><td>Semen and urine flow out through the urethra</td></tr><tr><td>Sperm duct</td><td>Sperm pass through and mix with fluids</td></tr><tr><td>Penis</td><td>carries sperm out the body</td></tr><tr><td>Glands</td><td>Produce hormones</td></tr></table> 7. <u>Fertilisation and pregnancy</u> Fertilisation- the joining of the nucleus of the sperm and egg gametes (sex cells) Implantation- a fertilised egg will implant into the lining of the uterus and develop into an embryo Gestation period- this is 9 months in a human  8. <u>Menstrual cycle</u> • The menstrual cycle prepares the female for pregnancy and stops if the egg is fertilised by a sperm. • The average menstrual cycle lasts 28 days. • Ovulation happens on day 14- this is when an egg is released from the ovary <table><tr><td>Day 1 to 5</td><td>Bleeding starts as the lining of the uterus breaks down and passes out of the vagina. This is known as having a period.</td></tr><tr><td>Day 5 to 13</td><td>Egg cells start to mature and the lining of the uterus starts to build up again.</td></tr><tr><td>Day 14</td><td>Ovulation</td></tr><tr><td>Day 15-28</td><td>The uterus wall stays thick waiting for a fertilised egg. If this does not happen, the cycle starts all over again</td></tr></table>	Testes	Where sperm is produced	Scrotum	Skin containing the testes	Urethra	Semen and urine flow out through the urethra	Sperm duct	Sperm pass through and mix with fluids	Penis	carries sperm out the body	Glands	Produce hormones	Day 1 to 5	Bleeding starts as the lining of the uterus breaks down and passes out of the vagina. This is known as having a period.	Day 5 to 13	Egg cells start to mature and the lining of the uterus starts to build up again.	Day 14	Ovulation	Day 15-28	The uterus wall stays thick waiting for a fertilised egg. If this does not happen, the cycle starts all over again
Testes	Where sperm is produced																			
Scrotum	Skin containing the testes																			
Urethra	Semen and urine flow out through the urethra																			
Sperm duct	Sperm pass through and mix with fluids																			
Penis	carries sperm out the body																			
Glands	Produce hormones																			
Day 1 to 5	Bleeding starts as the lining of the uterus breaks down and passes out of the vagina. This is known as having a period.																			
Day 5 to 13	Egg cells start to mature and the lining of the uterus starts to build up again.																			
Day 14	Ovulation																			
Day 15-28	The uterus wall stays thick waiting for a fertilised egg. If this does not happen, the cycle starts all over again																			

Year 7 Biology- Inheritance

9 and 10. Variation and measuring variation

- Variation can be **genetic** (caused by genes you inherit from your parents) or **environmental** (caused by your surroundings).
 - Variation can be caused by a combination of genetic and environmental factors.
- Height is determined by your genetics, but without enough protein in your diet your growth could be stunted.

Genetic	Environmental
Natural hair colour	Accent
Natural eye colour	Tattoos
Blood type	Piercings
Lobed ears	Language
Tongue rolling	Dyed hair

Discontinuous data can be put into categories. For example we could divide the class up into those who can roll their tongue and those who can't. We could show this using a **bar chart**.

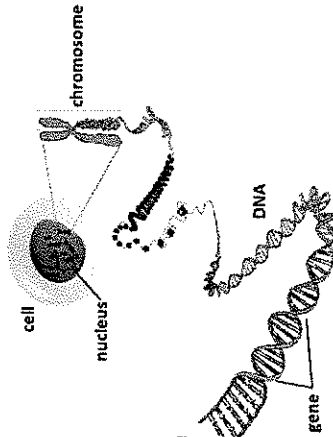
Continuous data cannot be put into categories; it can be anywhere within a range of values. For example we could order the class in height order. We could show this using a **line graph**.

11. DNA

Chromosomes	Structure which contains DNA .
Gene	A small section of DNA on a chromosome . These determine our characteristics.
DNA	A chemical that codes for our genes which determine our characteristics
Allele	A form of a gene

12. DNA

Human cells have **46 chromosomes** (found as 23 pairs). 23 are inherited from mum, through the egg. 23 are inherited from dad, through the sperm. Therefore, 50% of your genes are inherited from Dad and 50% are inherited from Mum.



13. Can you roll your tongue?

Tongue rolling is a type of **genetic variation**- you inherit the ability from your parents!

- The allele for tongue rolling is **dominant**

RR = CAN ROLL
Rr = CAN ROLL
rr = CANNOT ROLL

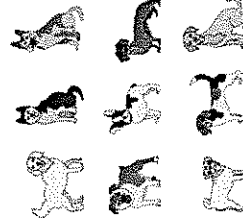
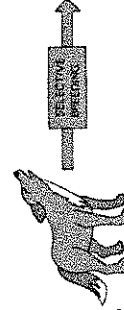
	Mum	
	R	r
r	Rr (can)	Rr (can't)
r	Rr (can)	Rr (can't)

When this male and female have a baby- there is a 50% chance their child will not be able to roll its tongue and 50% chance it will.

15. Selective breeding

Selective breeding is when humans breed plants and animals for particular genetic characteristics- such as: cows which produce lots of milk, dogs with high intelligence and plants which produce more fruit.

1. Decide which **characteristics** to select
2. Choose parents that show these characteristics from a mixed population. They are **bred** together.
3. Choose the best **offspring** with the desired characteristics to produce the next generation.
4. **Repeat** the process continuously over many generations, until all offspring show the **desired characteristics**.



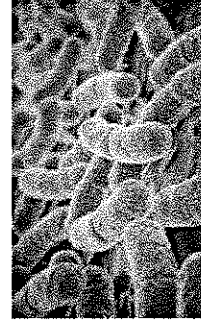
14. Genetic diseases

- Cystic Fibrosis is a **recessive genetic disease**.
- To inherit a recessive disease, you need to inherit **two copies** of the disease causing allele- one from mum and one from dad.
- Your mum and dad might not have the condition themselves, but may be **carriers** of the allele, so can pass this down to their offspring.

16. Cloning

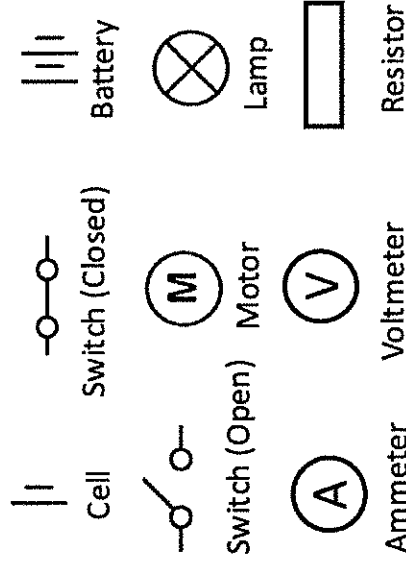
- Clones are genetically identical individuals.
- **Asexual** reproduction produces clones.

When bacteria reproduce, their offspring are clones.



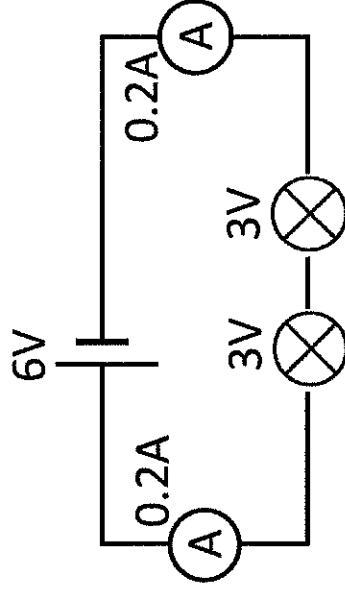
Year 7 – Electricity and Magnetism

1 – Circuit Components



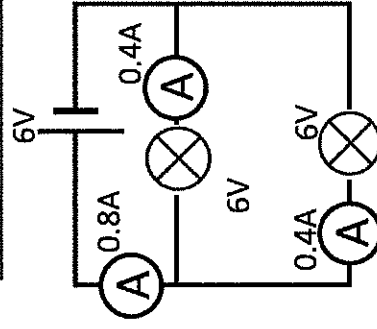
A circuit must be complete (no gaps) for a component to work.

2 – Series Circuits



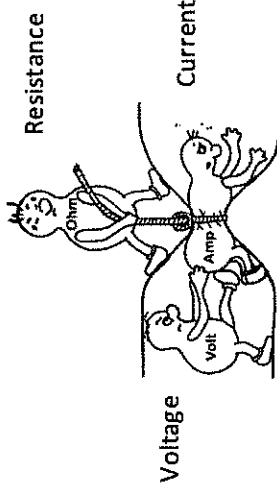
- Components are in one loop
- Current is THE SAME EVERYWHERE
- Voltage is SPLIT BETWEEN COMPONENTS

4 – Parallel Circuits



- Components are in different branches.
- Current is SPLIT between branches
- Voltage is THE SAME in each branch

3 – Current and Voltage



- Current is the flow of ELECTRONS through the circuit (measured in Amps, A)
- Voltage is how much ENERGY the electrons have (measured in Volts, V) This pushes the current through the circuit
- A greater voltage produces a greater current.

6 – Know Your Scientists!



Alessandro Volta (1745-1827)

Volta invented the battery after he and a colleague made frog's legs move when connected to two different metals. He replaced the frog's legs with paper soaked in salt water and the battery was invented. The unit for Voltage is named after him.

5 – Resistance

Resistance in a circuit makes it harder for the current to flow (measured in Ohms, Ω)

- Resistance can be increased by:
- Adding more components
 - Increasing the length of a wire

The higher the resistance, the more energy is transferred by a component.

E.g. A bulb with a greater resistance will be brighter.

Year 7 – Electricity and Magnetism

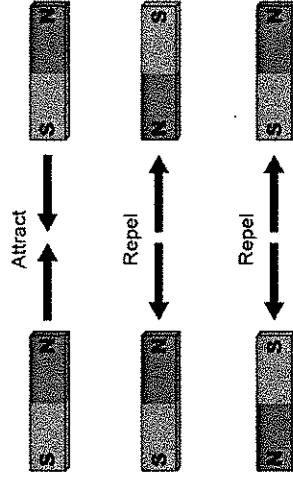
1 – Attract and Repel

A **magnet** can exert a force on another nearby magnet. Magnets have two poles:

- a **north pole**
- a **south pole**

Like poles (N–N or S–S) repel

Unlike poles (N–S or S–N) attract



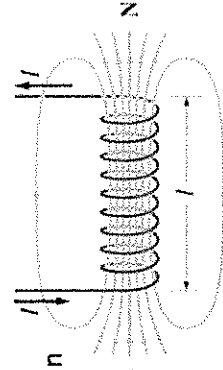
Magnetic materials (Nickel, Iron, Cobalt, Steel) are attracted to a magnet

4 – Electromagnets

An **electromagnet** is a **temporary magnet** produced using an **electric field**.

- Electromagnets can be switched off.

- Electromagnets can be made much stronger than permanent magnets.



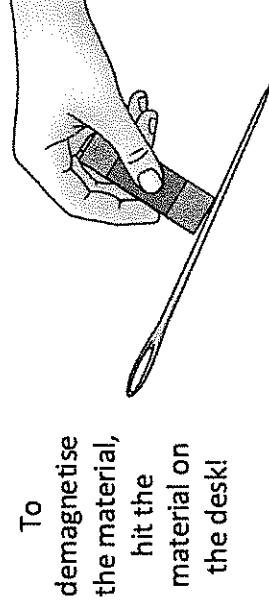
An electromagnet can be made stronger by:

- Increasing the **number of loops** in the coil.
- Increasing the **current**
- Using a **magnetic material** as the core

2 – Making a magnet

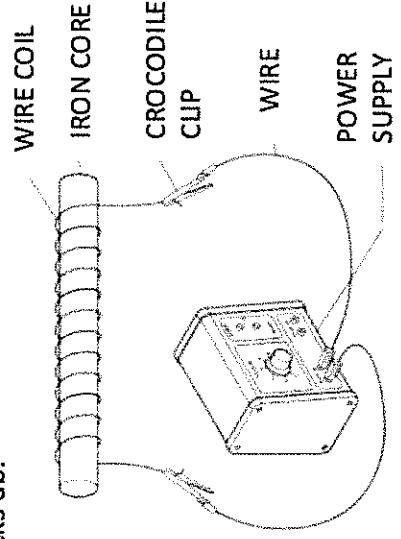
An **induced magnet** only becomes a magnet when it is placed in a magnetic field.

1. Take a magnetic material
2. Repeated stroke the magnetic material with a permanent magnet in the same direction



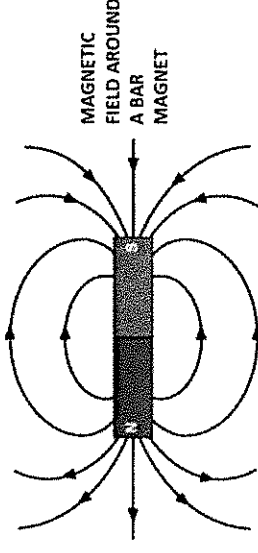
5 – Electromagnetic investigation

By altering the number of loops in the coil (independent variable), we can measure the **strength** of the electromagnet (dependent variable)- by testing how many paper clips it picks up!



3 – Magnetic fields

A magnetic field is a region of space in which there is a **magnetic force** felt by a magnet or magnetic material.



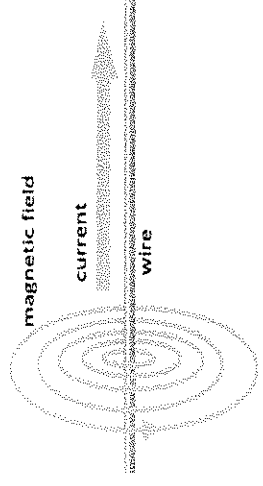
- Magnetic **field lines** are used to represent a magnetic field- out through the north and in through the south.
- The magnetic field is strongest where the field lines are close together.

6 – Know Your Scientists!

Hans Christian Ørsted
(1977-1851)

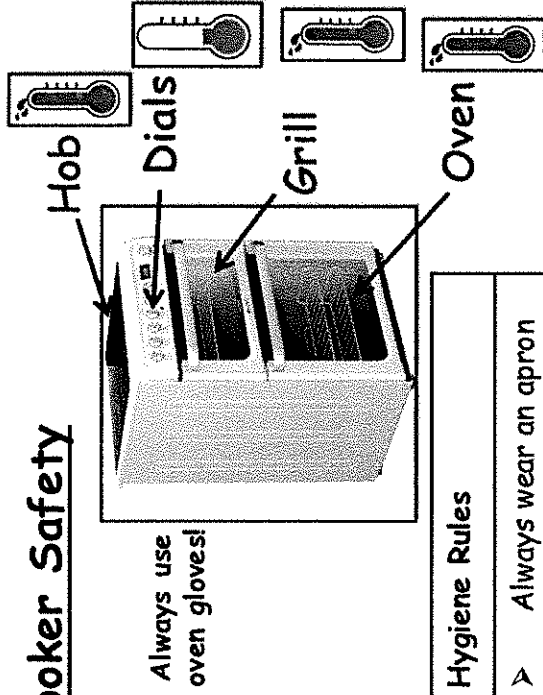


Ørsted was a Danish physicist who discovered that a wire with a current flowing through it has a magnetic field around it. This principle is used today in electric car motors!



Y7 Food Preparation and Nutrition - Knowledge Absolute

Cooker Safety



Food Science term	Definition
Dextrinisation	The browning of starch
Shortening	Stopping the gluten strands from stretching
Denaturation	When the structure of a food containing protein is altered by heat, chemical or mechanical action
Caramelisation	When sugar turns brown

Safety Rules
- Always walk - Carry a knife by the handle, pointing down at the side of your leg - Turn pan handles in - Use oven gloves and wooden triangles

8 tips for healthier eating
These eight practical tips cover the basics of healthy eating, and can help you make healthier choices.
1. Base your meals on starchy carbohydrates.
2. Eat lots of fruit and veg.
3. Eat more fish – including a portion of oily fish.
4. Cut down on saturated fat and sugar.
5. Eat less salt (max. 6g a day for adults).
6. Get active and be a healthy weight.
7. Don't get thirsty.
8. Don't skip breakfast.

Hygiene Rules
- Always wear an apron - Tie long hair back - Remove nail varnish - Remove jewellery - Wash pots in hot soapy water

Image

Method of Heat Transfer and explanation	Example of food cooked using this method
Conduction – Transfer of heat through the vibration of the particles. When the particles collide they pass on some energy.	Pasta Roast Beef Pizza
Radiation – Transfer of heat energy through waves of radiation. No direct contact between the food and heat source. When the waves of radiation reach food they are absorbed and heat up the food.	Toast Grill meat or fish
Convection – Transfer of heat energy through gases or liquids. When you heat the liquid the part near the heat source heats up first. The warmer liquid rises and cooler liquid falls. This circulation continues until all the liquid is heated. Convection also happens in ovens.	Pasta Rice Boiling vegetables

Name: Spatula
Use: Scraping bowls

Name: Sharp knife
Use: Cutting vegetables

Name: Mixing Bowl
Use: Mixing ingredients together

Name: Fish slice
Use: To lift products off baking trays

Name: Measuring jug
Use: To measure liquids

Name: Teaspoon
Use: Measuring ingredients

Name: Saucepan
Use: Boil or simmer food

Claw
Rubbing in = incorporating butter into flour using fingertips

Bridge
Always use the correct knife techniques.

Key Terms

Combine: To mix 2 or more things together

Hygiene: Cleanliness

Bacteria: germs

Organoleptic: involving the use of sense organs

Function: what something does

Provenance: where food comes from

Nutrient: Provides nourishment for the body

Dextrinisation: Browning of starch by dry heat

Coagulation: When a mixture sets

Sensory test: using sense organs to evaluate food

Enzymic: Action of enzymes

Carbon Footprint: Amount of carbon dioxide something releases into the environment

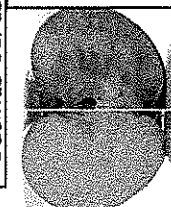
Greenhouse Gas : emissions that are harmful to the planet

Bridge and claw: knife holds

Quality Control: measures put into place to ensure uniformity

Four C	Description	Examples
Cleaning	Ensuring you clean yourself and your work area to prevent bacteria growth.	Wash your hands Wipe surfaces Wash all equipment
Cooking	Ensure food is cooked thoroughly to at least 72c in the centre.	Cooking meat until juices run clear
Chilling	Keep all food stored correctly, if it needs to be chilled keep in a fridge.	Keep chilled food in a fridge like cheese, milk and chicken.
Cross-Contamination	Ensure raw and cooked food are kept apart.	Use separate chopping boards and utensils for raw and cooked food. Keep raw food at the bottom of the fridge

Bacteria	Source	Symptoms
Salmonella	Raw meat, poultry, eggs, milk, dairy products	Diarrhoea, vomiting, fever & headache, abdominal pain
Listeria	Pasteurised and raw milk, cheese, soft ice cream, raw vegetables, raw meat	Flu like symptoms, nausea, vomiting, diarrhoea, may cause abortion, still birth, meningitis, septicemia.
Staphylococcus Aureus	Meat, meat products, poultry, nose and throat of humans	Vomiting, abdominal pain, diarrhoea
E-Coli	Sewage, soft cheese, minced beef and chicken	Diarrhoea, abdominal pain, nausea
Campylobacter	Meat, poultry, raw milk, untreated water, chickens	Diarrhoea, flu like symptoms, headache, fever, abdominal pain
Bacillus Cereus	Rice, cereal products and starchy foods i.e. potatoes.	Diarrhoea, abdominal pain, nausea



Enzymatic Browning
When fruits containing polyphenol oxidase are exposed to oxygen they go brown. This includes fruits like apples and bananas. This is enzymatic browning.
Grating or bruising the fruit speeds this up and adding acid like lemon juice or blanching the food slows it down.

How to write a hypothesis

- ✓ A hypothesis is what you think you will prove e.g. I think that the best sauce will be contain plain flour .
- ✓ It is clear and to the point
- ✓ No more than two sentences

How to conduct a fair test

- ✓ Always have a control to compare the samples to
- ✓ Only change one thing in each sample so you know what is effecting the sample
- ✓ Always use sample codes to prevent bias
- ✓ Use a variety of testers

Why do we choose the foods we eat?

- ✓ Cost
- ✓ Culture/religion
- ✓ Seasons
- ✓ Medical issues
- ✓ Marketing/advertising
- ✓ Ethics



Seasonal food

- ✓ Reduces food miles and environmental impact
- ✓ Costs less
- ✓ Supports local producers
- ✓ Taste and looks better/fresher

Organic food

- ✓ Can be of a higher quality
- ✓ Can taste better
- ✓ More ethical
- ✓ Less environmental impact
- ✓ More sustainable
- ✓ Can be expensive



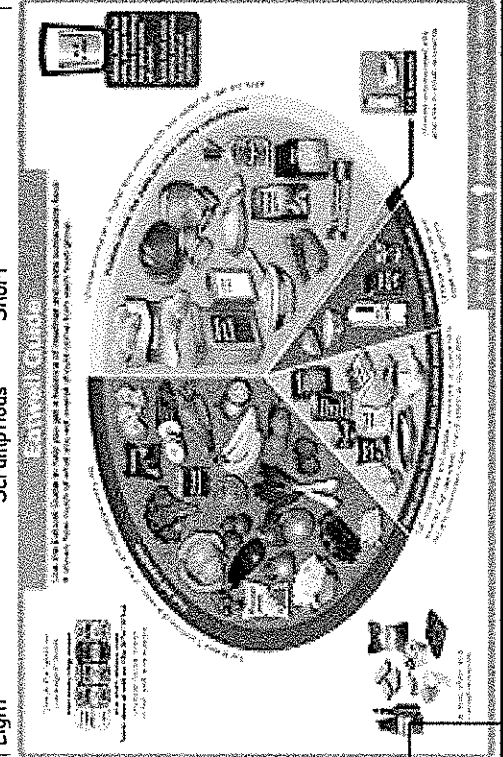
Fairtrade - Supports farmers in developing countries by offering better prices and better working conditions. Products such as: bananas,

How to save money when buying food

- ✓ Compare prices
- ✓ Buy food seasonally/locally
- ✓ Use coupons or offers
- ✓ Plan your meals
- ✓ Only buy what you need



APPEARANCE	FLAVOUR	TEXTURE	AROMA
Attractive	Acidic	Brittle	Acid
Appetising	Aftertaste	Bubbly	Aromatic
Bright	Balanced	Chewy	Burnt
Burnt	Bitter	Clammy	Cheesy
Colourful	Bland	Close	Fishy
Colourless	Buttery	Creamy	Floral
Crumbly	Cheesy	Crisp	Fragrant
Crystalline	Citrus	Crumbly	Fruity
Cuboid	Cool	Crunchy	Light
Dark	Delicate	Dry	Meaty
Dull	Delicious	Flaky	Musty
Evenly baked	Fizzy	Fluffy	Perfume
Firm	Greasy	Greasy	Pungent
Fizzy	Herby	Gritty	Rancid
Flaky	Hot	Hard	Roasted
Flat	Light	Juicy	Rotten
Fragile	Mature	Lumpy	Savoury
Glossy	Mild	Moist	Scented
Golden	Peppery	Mushy	Sour
Golden brown	Refreshing	Open	Spicy
Greyish	Rich	Rubbery	Strong
Heavy	Salty	Runny	Zesty
Interesting	Savoury	Sandy	
Light	Scrumptious	Short	



Nutrients

Macronutrients - needed in large amounts e.g. fat, protein and carbohydrate
Micronutrients - Needed in small amounts e.g. vitamins and minerals
Food groups - Starchy foods, meat, fish and alternatives, dairy foods, oils and spreads, fruit and vegetables.

Year 7 MOOD LIGHT

Design and Technology – MoodLight

circuit	electronic circuit is composed of individual electronic components, such as resistors, transistors, capacitors and diodes, connected by conductive wires through which electrical current can flow.
Isometric drawing	Isometric drawing , also called isometric projection , method of graphic representation of three-dimensional objects, used by engineers, technical illustrators, and, occasionally, architects.
Millimetre	Unit of measurement (metric). There are ten millimetres in a centimetre.
Environment	Can you recycle the product, is it environmentally friendly. Which environment will your product be used or be displayed
Safety	How will you ensure that your product will be safe to use for everyone including children?
parallel	Parallel definition, extending in the same direction, equidistant at all points, and never converging or diverging; parallel rows of trees.
right angle	When two straight lines intersect each other at 90° or are perpendicular to each other at the intersection, they form the right angle
soldering	Soldering is a joining process used to join different types of metals together by melting solder. Solder is a metal alloy usually made of tin and lead which is melted using a hot iron.
softwood	Softwood refers to Timber that has been cut from a coniferous or an evergreen tree. Softwood trees are fast growing due to not loosing their leaves.
hardwood	Hardwood is wood from deciduous trees. These are usually found in broad-leaved temperate and tropical forests
manufacture specification	A specification which contains all the information that is needed to make the product. It describes the stages of manufacture and the materials needed.
finishes	Finishes are added to a product's surface after production to improve its functionality and/or aesthetic. Such as: Change the colour of a product, Improving appearance/make the product look more attractive, Change the look and feel of a product Wood stains to enhance the colour of timber. Other finishes for wood are – Varnish, wax, paint or Danish oil.
Input/ output	The input-process-output (IPO) model, or input-process-output pattern, is a widely used approach in systems analysis and software engineering for describing the structure of an information processing program or other process.
L.E.D- Light Emitting Diode	Low voltage light output component used in electronic circuits.
Marking – out ;	Used to measure materials for cutting or joining.
Wood joint	Joints are used to build strength into products made from wood. They should fit accurately .

Specialist materials	Specialist equipment	Uses
M.D.F – medium density fibreboard	Tenon saw	This is manufactured board that is made from wood dust and glue it is cheap but breaks easily when cutting. Used to make the insert for the lid.
Plywood	Bench Hook	Manufactured board made from multiple layers of thin wood veneer rotated by 90 degrees to each other , cross grain reduces warping.
	Cross File	
	Vice	
	Power drill	
	Strip Heater	
	Belt sander End Grain sander	
Materials	Meaning	
P.V.A		Tenon saws are commonly used to make the Tenon's used in mortise and Tenon joints. The saw has a short straight blade . A bench hook is a workbench appliance used in woodworking to hold a workpiece in place while crosscutting with a hand saw. To reduce the surface imperfections and remove waste material to hold the material whilst it is being worked on
Acrylic		Power drill to make the holes in wood metal and polymers for the keyring Method of shaping plastic materials like acrylic. Used to heat and fold (bend) in a line to different angles. A belt sander is designed for high speed sanding, quickly stripping a piece of wood with powerful force, with a rotating abrasive surface.

Working Properties	
Working properties relate to how a material responds to external forces and/or conditions.	
Strength	The ability of a material to withstand force without breaking. Examples of forces include pressure, tension, compression, shear and torsion. Materials may be strong in one force but weak in another (e.g. concrete is strong in compression but weak in tension).
Hardness	The ability of a material to resist wear, abrasion, scratching or denting. Diamond is the hardest naturally occurring substance found on Earth.
Toughness	The ability of a material to absorb energy without fracturing
Ductility	The ability of a material to be bent and shaped without breaking
Plasticity	The ability of a material to be stretched or pulled into a strand without breaking
Elasticity	The ability of a material to return to its original shape after being stretched, bent or compressed

NATURAL TIMBERS

Hardwoods

Hardwood is from a deciduous tree, usually a broad-leaved variety that drops its leaves in the winter

Ash

Properties: Flexible, tough, and shock resistant
Laminates well, pale brown
Uses: sports equipment & tool handles.

Beech

Properties: Fine finish, tough & durable. Beige with pink hue.
Uses: Children's toys and models, furniture, veneers.

Mahogany

Properties: easily worked, durable & finishes well.
Reddish brown.
Uses: high end furniture and joinery, veneers.

Balsa

Properties: very soft and spongy, good strength to weight ratio, Pale cream/white.
Uses: prototyping and modelling.

Oak

Properties: Tough, hard and durable, high quality finish possible. Light brown.
Uses: flooring, furniture, railway sleepers, veneers.

1 Give two differences between hardwood and softwood.

(2) Hardwood comes from deciduous trees. (1)
Softwood comes from coniferous trees. (1)
Deciduous trees are usually slower growing which makes the wood denser. (1)

Softwoods

Softwood is from a coniferous tree, one that usually bears needles and has cones.

Pine

Properties: Lightweight, easy to work, can split and be resinous near knots. Pale yellowish brown.
Uses: Interior construction and furniture.

Spruce

Properties: easily worked, high stiffness to weight ratio. Creamy white colour.
Uses: Construction, furniture and musical instruments.

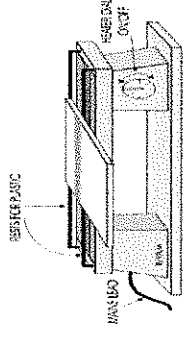
Larch

Properties: durable, tough, good water resistance, good surface finish. Pale reddish brown. Reddish brown.
Uses: exterior cladding, decking, machined mouldings, furniture and joinery, railway sleeper and veneers.

Bending

Line bending enables thermoplastics to be formed. Acrylic sheets are suitable for this process.

A line bender heats a sheet of thermoplastic over a strip heater until it is soft. It can then be bent to a chosen angle. When the plastic cools, it retains the shape.



Design and Technology – Moodlight

Tension saw

Uses: Cutting shallow finger and small pieces of wood. Wood joints.

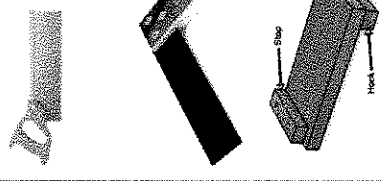
For: Joinery

Tri – Square

Uses: to mark out line perpendicular to the edge of work piece.
Check 90 degree angles

Bench Hook

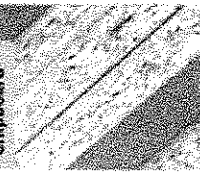
Uses: enables a piece of wood to be held firmly in position on a workbench while it is cut through.



MANUFACTURED TIMBERS

Manufactured boards are usually sheets of processed natural timber waste products or veneers combined with adhesives. They are made from waste wood, low-grade timber and recycled timber.

Chipboard



Properties: Good compressive strength, not water resistant unless treated, good value but prone to chipping on edges and corners.

Uses: Flooring, low-end furniture, kitchen units and worktops.

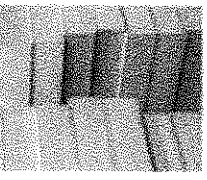
Plywood



Properties: Very stable in all directions due to alternating layers at 90 degrees, with outside layers running in the same direction.

Uses: Furniture, shelving, toys and construction interior, exterior and marine grades available for greater water resistant.

Medium density fibreboard (MDF)



Properties: Rigid and stable, with a smooth, easy to finish surface. Very absorbent so not good in high humidity or damp areas.

Uses: Good value, flat pack furniture, toys, kitchen units and internal construction.

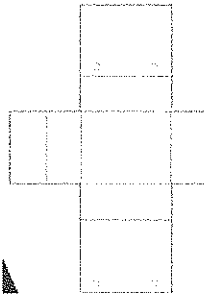
Positive and negative impact - ecological footprint

How does sourcing our materials affect the environment?

Mining Digging the ground or dredging rivers The removal of minerals from the earth
Mainly metal based - aluminium ore, gold, silver, iron ore. Mining land - digging huge holes and removing the sediment with huge holes causing stagnant ponds.

Deforestation cutting down of trees for land or to use for timber / paper The act of cutting down trees in forests. Trees can be 'farmed' just like any other crop, planting the trees specifically to cut down for materials.

Sometimes, deforestation is not responsible and trees are not replanted, animals are not re-homed.



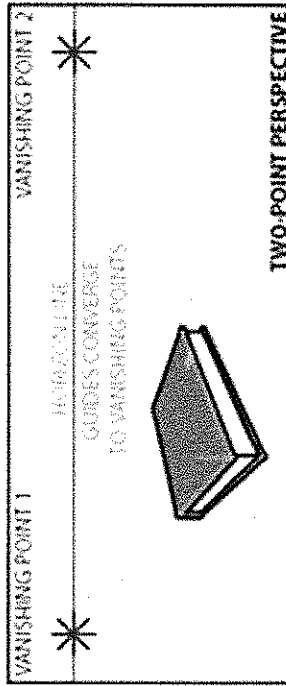
A net is a 2D plan for making a 3D object. You can use CAD to design a net and then use a machine to cut it out.

Mathematical modelling is another way to model. These models use data and information regarding variables to show how an object will behave in reality.



Two point perspective

Perspective Drawing tries to show what something actually looks like in 3D- smaller in the distance. Larger closer up. It does this by using lines that appear to meet at points called vanishing points.



TWO-POINT PERSPECTIVE	
Advantages of CAD	Disadvantages of CAD
Ideas can be drawn and developed quickly	Expensive to set up
Designs can be viewed from all angles and with a range of materials	Needs a skilled workforce

KEYWORDS

1. Techsoft - A computer program used for drawing.
2. Laser Cutter-CAM machine for cutting accurate shapes.
3. Deformation Changing the shape of plastics / metals.
4. Line bender- A line bender has a heated element that provides heat, concentrated to just a few millimetres wide, along the length of the long machine. These are used to heat polymers along this line so that they can be bent. Once the polymer softens, it will bend easily into shape around a former before being left to cool.
5. Two point perspective - Perspective Drawing tries to show what something actually looks like in 3D- smaller in the distance. Larger closer up. It does this by using lines that appear to meet at points called vanishing points.
6. Orthographic They show a 3D object in a set of 2D drawings viewed from different angles. - A front view plan view and end view.
7. Laser cutting : Laser cutting uses a high-power laser to cut through materials like plywood, it is controlled through CAD which is then sent to the CAM (the laser cutter)
8. CAD - Computer Aided Design
9. CAM - Computer Aided Manufacture

Advantages of CAM	Disadvantages of CAM
Fast and accurate production	Expensive to set up
Machines can run constantly on repetitive tasks	Needs a skilled workforce of engineers

1. Task Analysis
2. Design Brief
3. Primary Research
4. Secondary Research
5. Anthropometrics
6. Ergonomics
7. Design Fixation
8. User Centred Design
9. Iterative Design
10. Tie Dye
11. Resist Dye
12. Risk assessment
13. Sustainable
14. Organic
15. Natural fibre
16. Smart Material
17. Production Aid
18. Ferrous
19. Non Ferrous
20. Alloy
21. Mould
22. Casting
23. Pewter
24. Hack saw
25. Files
26. Abrading
27. Abrasive papers
28. Metal polish

Tools and Equipment

Paper Scissors- Used for cutting out paper patterns.

Iron-

Unpicker- Unpickers are also known as seam-rippers, quick-unpicks. You insert the unpicker between the stitches and pull up so the threads are cut by the small blade.

Dressmaking scissors- Also called fabric shears to cut fabric. These have long very sharp blades.

Pins- Hold the fabric together before stitching together.

Needles- for hand stitching- there are several sizes for thickness of the thread/ beads being used.

Measuring Tape- flexible so it can follow curves

Tailors Chalk- for drawing on fabric

Sewing Machine- Strong stitches. Speeds up manufacture.

Research

Task Analysis- The designer should pick out all the key points in the brief- one way of doing this is through a spider diagram called a task analysis. It's a way of analysing the brief and deciding what research is needed. This helps the designer get ideas; checks people actually want the product; finds out what the target market likes/dislikes about existing products; find out about materials, components, techniques, manufacturing processes and costs.

Design Brief

The starting point for any design is the design brief. The brief outlines what problem a design will solve. It should be referred to throughout the project to make sure what you are working on will solve this problem. The client gives the designer a design brief. It should include: What kind of product is needed, how the product will be used, who the product is for.

Primary Research

Primary research is one that involves the gathering of fresh data, i.e. when data about a particular subject is collected for the first time. Primary research is any type of research that you collect yourself. Examples include surveys, interviews and observations.

Secondary Research

Secondary research involves the summary, collation and/or synthesis of existing research. When conducting secondary research, authors may draw data from published academic papers, government documents, statistical databases, and historical records.

Questionnaire- Primary research. You can find out about your target markets and the information will help you design a suitable product to meet their needs.

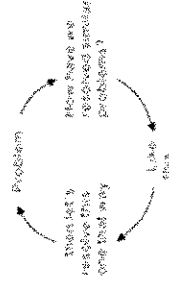
Anthropometrics- human body measurement data.

Ergonomics- A product that is easy and comfortable for people to use.

Design Fixation- It is when a designer fails to break new ground, but follows existing solutions. It is when the designer follows conventional ideas.

User Centred design - Asking A sample of the target market for input in the design process. The aim is gain feedback from potential users on your designs and make improvements so its more appealing to your target market

Design Fixation



Iterative design- a design strategy that involves constantly evaluating and improving a products design.

Cotton- Comes from a plant. It is grown and the cotton is taken from the cotton boll.

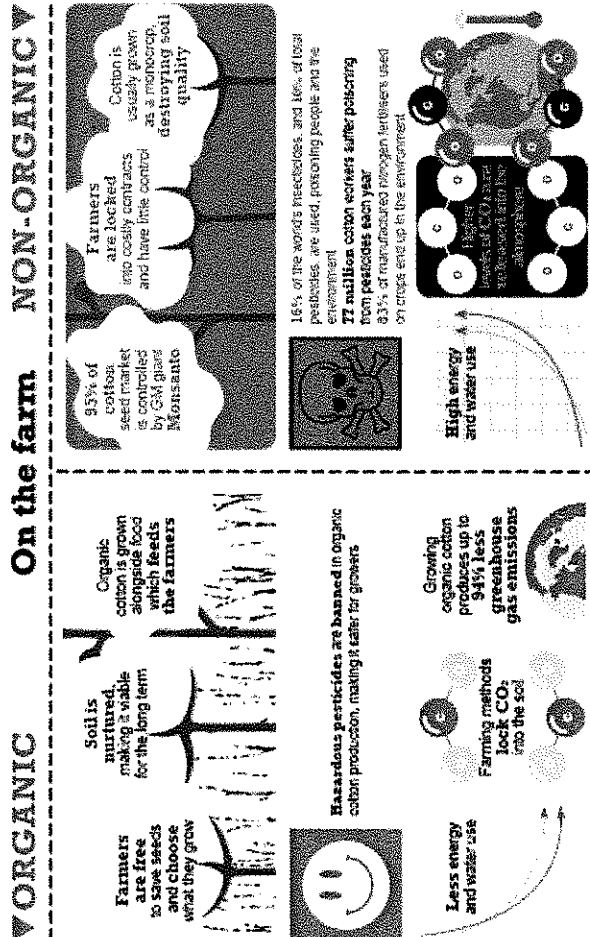
Sustainable- A sustainable process or material is one that can be used without causing permanent damage to the environment or using up finite resources

Organic- production without the use of chemical fertilizers, pesticides, or other artificial chemicals

Manufacturing Process- Tie Dye

Is typically brightly coloured, patterned textile or clothing which is made from ordinary cloth, usually cotton, through a **resist dyeing** process known as tie-dyeing. Methods are used to "resist" or prevent the dye from reaching all the cloth, thereby creating a pattern. Elastic bands resist the dye. A **mordant** fixes the dye and stops it from running. Salt is a mordant.

Positive and negative impact of the use of cotton.



Natural and Synthetic Fibres

Natural fibre A type of fibre that is harvested from natural sources e.g. plants and animals.

Natural fibres: cotton, wool, silk

Synthetic fibres: polyester, polyamide (nylon), elastane (lycra)

Natural fibres can come from plant or animal sources

Origins	Example	Properties	Uses
Cotton comes from the fine hairs on the seed pod of a cotton plant.		Soft and strong, absorbent, cool to wear and easily washable. Cotton fabrics can be given a brushed finish to increase their thermal properties	Most clothing, especially shirts, underwear and denim can be made from cotton. Also used for towels and bedsheets

Scale of Production

One Off Production (Also known as: bespoke, made to measure, custom made.) A single product or unit is made.

Mass Production Large numbers of identical products are manufactured over a long period of time. Used for products constantly in demand.

Continuous Production differs from mass production as it runs non-stop, 24 hours a day, 7 days a week. manufacturing products to meet a constant demand

Batch Production A specific quantity of a product is made; this is called a batch. Batches can be repeated as many times as necessary.

Health and Safety of the Sewing Machine

Dangers when using an industrial sewing machine. - E.g. stitching fingers, electrocution, and inhalation of textile dust. Two dangers related to use of industrial sewing machines. You can reduce the dangers of using a sewing machine by - Training of staff, regular safety and maintenance checks, emergency stop buttons, regular breaks so concentration is not lost. One person per machine, tidy areas. Keep fingers away from the needle.

Risk Assessment

Is used to identify and minimise any risks when working. Think about the hazard and the precaution that could be taken to minimise the risk.

Hazard	Precaution
Clothing could get caught in the sanding machine.	Tuck clothes in and wear an apron.
Fine dust created when using a sanding machine.	Wear a mask and use a dust extractor.

Profit and Costing

When considering costings, you must consider- how many products you are making, the cost of materials, machinery and overheads.

Bulk buying

Raw materials can be bought in bulk because your buying so much it allows you to negotiate a discount with the supplier.

Metals.

1. What is Ferrous metal?

Ferrous metal contains Iron & is magnetic. Example : Steel.

2. What is Non - Ferrous metal?

Non ferrous does not contain iron & is not magnetic. Examples : aluminium, copper.

3. What does Alloy mean?

A metal made by combining two or more metallic elements, especially to give greater strength or resistance to corrosion. Examples : Brass, Bronze.

Positive and negative impact - ecological footprint

How does sourcing our materials affect the environment?

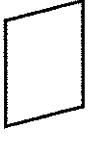
Mining Digging the ground or dredging rivers The removal of minerals from the earth Mainly metal based - aluminium ore, gold, silver, iron ore. Mining land - digging huge holes and removing the sediment with huge holes causing stagnant ponds.

Flowchart

It is beneficial as: The order of making is logical, to helps meet schedules/deadlines. It simply/clearly communicates instructions for making so all the pieces are made in the same way.

Flowcharts have inputs which is equipment, machinery material and components needed. A flowchart must include quality control Check points, these are decisions. Feedback is used as a form of quality control and should form a yes or no answer

A flowchart is a type of diagram that represents a workflow or process. These symbols represent stages in the flow.

	All flowcharts begin and end with the start/ finish symbol. This shape is called a terminator .
	A process box is used when there is an instruction that must be carried out.
	A diamond box is used when a decision needs to be made. The outcome of the decision must be either yes or no.
	Inputs to the system are represented by a parallelogram box

Commercial Process Casting

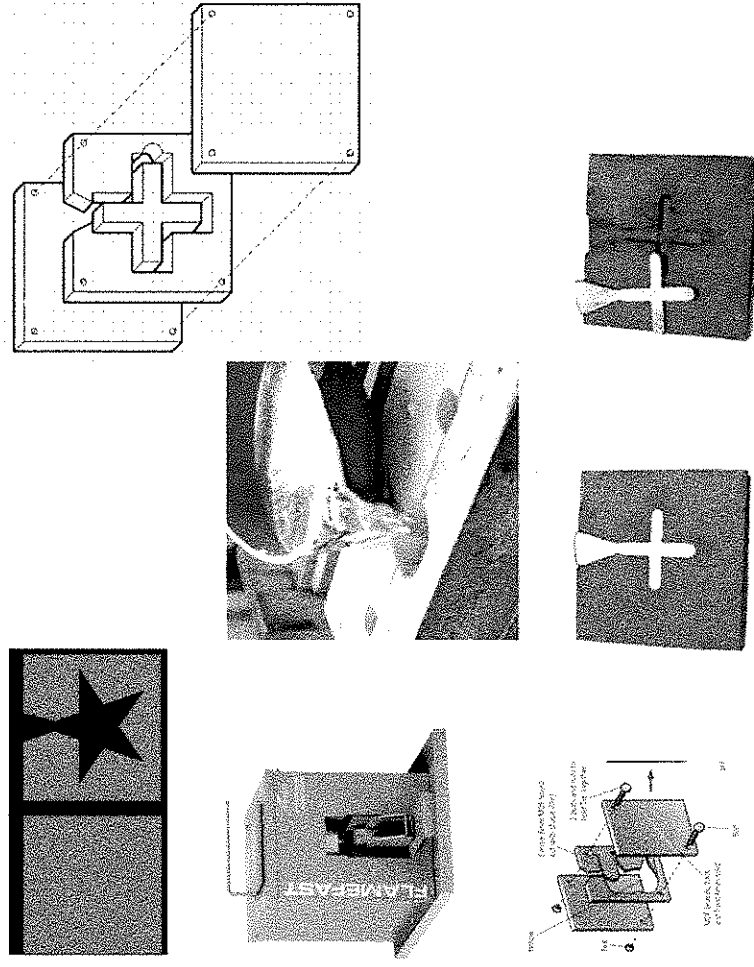
A mould can be made from any material , it is used to pour molten metal into, to create a shape we are using it to pour molten pewter into it.

Explain what is meant by casting.

When you heat metals (or polymers) and pour them into a mould this is called casting.

What is a sprue?

The funnel for pouring the pewter into.



Smart Materials

That materials can have one or more properties that can be significantly changed in a controlled fashion by external stimuli, such as stress, temperature, moisture, or PH e.g. shape memory alloys, thermochromic pigments and photochromic pigments

Thermochromic paints can be added to any surface like these mugs or a textiles or card based product to react to heat.

