

Year 10 Option Subjects

Knowledge Organiser

January - March 2026

AMBITION, CONFIDENCE, CREATIVITY,
RESPECT, DETERMINATION

Proud to be
part of the
 GREENSHAW
LEARNING TRUST



Why do we have knowledge organisers?

Knowledge organisers are a collation of the basic essential knowledge for success in each subject area that will underpin your learning for the term.

They are designed to provide the information you will need to be committing to your long term memory through recall exercises in Low Stakes Quizzing.

How do we use knowledge organisers?

You should be using these KOs to create your homework quizzes so that you are practising retrieving information.

1. You can do this by testing yourself on the definition of key terms (both recalling the key term and then swapping to recall the definition), practice labelling diagrams, retrieves reasons and justifications for the main learning points.
2. They can also be used for 'memory dumps' where you try to recall as much of the information about a topic as possible and then use the KP to fill in the gaps.
3. They can also be used in class to assist with retrieval of the core knowledge needed for each subject.

You should have these with you at all times in school and out on your desk in all lessons.

If you lose your KO or it becomes too dishevelled, please purchase a new one from the Head of Year or the School Office.

<u>Contents</u>	
History	Page 1
Geography	Page 6
French	Page 13
Spanish	Page 15
Art	Page 17
Drama	Page 20
Photography	Page 24
Business	Page 26
PE	Page 30
Computer Science	Page 34
RE	Page 41

AMBITION, CONFIDENCE, CREATIVITY,
RESPECT, DETERMINATION

Proud to be
part of the
GREENSHAW
LEARNING TRUST



Viking Expansion Year 10 OCRb GCSE History: 1. Homelands

1 The Vikings in Scandinavia

Life in the Viking homelands was determined by the geography of Scandinavia

The Homelands

DENMARK is a fertile land of gently rolling hills in the south of Scandinavia.

NORWAY has a long coastline stretching to the Arctic. Along the coast are inlets called **fjords**. Inland there are huge mountains.

SWEDEN also stretches north to the Arctic. It is a land of thick forests and lakes.

Viking Society

- Viking society was **hierarchical** and divided into three main groups
 - Jarls were large landowners and warriors.
 - Bondi were small landowners who fought for the jarls
 - Thralls were slaves who had been captured in war
- Viking society was **patriarchal**: women could not be **bondis** or **jarls**, instead running the household and managing the **thralls** when men were away

Everyday Life

- Vikings lived in **wooden longhouses** which they shared with their animals during the winter
- Most Vikings earned a living by **farming, fishing, or hunting**
- Viking food came from a variety of sources:
 - **Farming**: milk, eggs, pork, rye bread
 - **Fishing**: herring and shellfish
 - **Hunting**: elk and deer
- Food was preserved by **salting or smoking**

VOCABULARY

Fertile	Able to grow crops
Patriarchal	Dominated by men
Polytheistic	Having lots of different gods
To sacrifice	To kill something as an offering to the gods
Salting	Coating food in salt to preserve it

2 Viking ships, seafaring, and trade

Seafaring was an essential part of living in the Viking homelands

Viking Ships

- Viking ships were made of wood and powered by both sails and oars
- Warships - **skeids** - were long and narrow, allowing them to travel quickly, reaching Britain in just 2 days
- Cargo ships - **knarrs** - were wider and sturdier

Trade

- Ships allowed the Vikings to **trade** with places such as **England, Scotland, and northern Germany**
- In the 8th Century, trading towns such as **Hedeby (Denmark)** and **Kaupang (Norway)** began to develop
- Each town was protected by a **jarl** and traded in jewellery, cloth, and iron

3 Viking beliefs and rituals

Religion was central to Viking life but it is difficult to know precisely what they believed

The Vikings believed that the centre of the universe was a sacred tree called **Yggdrasil**, which was split into levels

Asgard --- the home of the gods

Midgard --- the world of the humans

Hel --- the underworld

Viking religion was **polytheistic**. The most important gods were:

ODIN

- The ruler of **Asgard**
- God of warriors
- Warriors who died feasted forever in his hall, **Valhalla**

THOR

- Odin's son and protector of **Asgard**
- God of sailors
- Carried a hammer

FREYA

- The goddess of love and fertility
- Her twin brother Freyr was the god of farming

The Vikings sacrificed horses as offerings to their gods and held huge **feasts** in their honour.

Viking Expansion Year 10 OCRb GCSE History: 2. The Volga Vikings

4 Trade and settlement in Russia

From the 8th Century, Vikings began to explore, trade with, and settle in the river systems of western Russia

c. 750 Vikings from Sweden travelled up the Neva and Volkhov rivers and settled in Staraya Ladoga

By hauling boats and trade goods over land the Vikings were able to reach two important rivers:

c. 800 The River Dnieper allowed the Vikings to travel south to the Black Sea and reach Constantinople and the Byzantine Empire

The River Volga allowed the Vikings to travel South to the Caspian Sea and reach Baghdad and the Abbasid Empire

These Volga Vikings exchanged swords, furs, walrus ivory, and slaves for silver and gold

c. 850

Volga Vikings - known by local Slavs as Rus - began to settle along the banks of rivers

The Rus formed an elite who ruled over the Slavs

They built the large towns of Novgorod and Kiev

The Rus eventually assimilated, speaking Slavic and marrying Slav women

VOCABULARY

Abbasid Empire

Became similar to

Markets

Large and powerful Muslim empire

High status

Foreign soldiers hired for money / rewards

People who travel to trade goods

The name given to the Vikings in eastern Europe

The people of Eastern Europe

The Vikings who settled in eastern Europe

Assimilated

Bazaars

Byzantine Empire

Elite

Mercenaries

Merchants

Rus

Slavs

Volga Vikings

5 Trade and interaction with the Arab World

By the 10th Century, Vikings interacted regularly with the Arab world

- Baghdad was the capital of the Abbasid Empire and home to over a million people

- Volga Vikings travelled down the Volga, crossed the Caspian Sea, and trekked by camel to Baghdad

- In the city's bazaars, Vikings exchanged their goods for:

Silk, transported from China

Arabic silver coins, called *dirhams*

- Interactions were not always peaceful: 500 Viking ships raided Baku in 913

6 Constantinople and the Byzantine Empire

At different times the Vikings were traders, raiders, and mercenaries in the Byzantine Empire

Traders

- Viking merchants traded for wine, olive oil, fruit, and spices in the bazaars of Constantinople

Raiders

- Viking raiders attacked Constantinople in 860, 907, and 940
- Although they were unsuccessful, they forced the Byzantine emperor to sign trade treaties

Mercenaries

- The emperor formed an elite bodyguard of Vikings called the Varangian Guard

Viking Expansion Year 10 OCRb GCSE History: 3. Raiders and Invaders

7 Raids in Britain, Ireland, Scotland, and France

From the 790s, the Vikings began to raid wealthy areas of western Europe

Historians have divided the Viking raids on western Europe into four phases:

PHASE 1 Vikings raided Lindisfarne in 793

- 793-830 Hit-and-run attacks on other coastal monasteries with 2/3 ships

PHASE 2 Larger raids with 30-100 ships

- 830-850 Raiders travelled up rivers to attack inland trading towns

PHASE 3 The Vikings began over-wintering in defendable areas 850-865

PHASE 4 Large Viking army lands in England

- 865- Vikings become invaders not raiders

Historians disagree about the causes of the Viking raids:

- Shortage of fertile land in the Homelands
- Wealthy European monasteries
- An opportunity for Jarls to gain glory
- Divided and weak western Europe
- Improvements in ship technology

The nature of the Viking raids was different in different parts of western Europe:

Britain	Scottish Islands	Ireland	Frankish Empire
• Raids on monasteries in the 790s (Lindisfarne, Jarrow, Iona)	• The Orkney and Shetland Islands	• 795 to 830, Vikings raided monasteries	• From the 840s, the Vikings sailed up the River Seine to attack Rouen and Paris
• Raiders looted gold and silver and ransomed monks and holy books	• offered good grazing land	• From 830, larger raiding fleets arrived and over-wintered	• The Franks' defensive measures included fortified bridges
• Attacks on market towns in 830s	• seized the islands from the Picts	• In 841, Vikings established Dublin as a base	• As a result, raids stopped in the 860s
• Vikings overwintered in Kent in 850-1			

8 Viking warfare

Viking raiders were feared warriors and sailors

Warriors	Tactics	Warships
Viking warriors used a range of weapons:	In battle, Viking warriors formed a shield wall	By 800, the Vikings had developed ideal ships for raiding. They had:
Double-edged swords	Viking berserkers whipped themselves into a frenzy before combat	✓ A sail for rapid ocean travel
Battle axes		✓ Oars for rowing into the wind and up rivers
Wooden shields	Raiders murdered monks who resisted, often performing the 'blood eagle' ritual	✓ A shallow draught for landing on beaches
		✓ Capacity for over 100 warriors on the largest ships

9 The 'Great Heathen Army' and the Danelaw

In 865, a Viking army invaded England, eventually gaining control of the Danelaw

The Viking 'Great Heathen Army' rampaged across England for 14 years

- Vikings demanded Danegeld from the Anglo-Saxons
- By 878 the army had conquered East Anglia, Mercia, and Northumberland

In 878, the Vikings were defeated by King Alfred of Wessex at the Battle of Edington. Alfred and Guthrum, the Viking leader, agreed the Treaty of Wedmore:

- Vikings can settle the Danelaw (northeast England)
- Guthrum must be baptised as a Christian

VOCABULARY

Blood Eagle	A gruesome Viking execution method
Beserker	A particularly ferocious Viking warrior
Draught	The depth of a ship's hull
Fortified	Defended
Monasteries	Large, wealthy Christian religious centres
To over-winter	To stay in one place over the winter, rather than returning home
Ransom	To demand money to return something / someone

Viking Expansion Year 10 OCRb GCSE History: 4. Settlers

10 Settlement in western Europe

The nature of Viking settlement in western Europe varied from place to place

800	Scotland and the islands	• Vikings established rural settlements in the Shetland/Orkney Islands, north of Scotland, and Isle of Man, based in Pict villages • Place names ending in -ness and -wick suggest Vikings dominated these areas
865	England	• The Danelaw was ruled by jarls based in fortified trading towns called burhs, such as Jorvik • Large numbers of Viking place names (-by, -thorpe) and words (egg, sky, slaughter) suggest significant settlement
911	Normandy	• In 911, the French king offered a Viking, Rollo, control of Normandy in return for Christian conversion and protection against raiders • Viking settlement was limited to coastal areas / rivers • The settlers assimilated into French society and became Normans
914	Ireland	• Viking settlement was limited to coastal towns, such as Dublin • Dublin was a large trading base with wooden thatched houses • By the 11th Century, Vikings had assimilated into Irish society, for example converting to Christianity

11 Jorvik

Archaeological evidence from Jorvik can tell us a lot about Viking settlement

The Vikings captured Jorvik from the Anglo-Saxons in 866. By the 11th Century, 10,000 people lived there

- Homes in Jorvik were small, wooden structures with a latrine outside in the yard
- It's location on the River Ouse made Jorvik a trading centre for metals, silk, and ivory
- Vikings minted coins using Anglo-Saxons designs
- Burials in churchyards suggest Christianity, although coins often portrayed Thor and Odin
- Vikings lived alongside Anglo-Saxons in Jorvik and intermarriage was common

12 Iceland, Greenland, and North America

From the 9th Century, the Vikings established settlements across the North Atlantic

ICELAND (870-)	GREENLAND (983-)	NORTH AMERICA (1000-)
• Settlers in Iceland found little fertile land or wood for houses • Food came from fishing, hunting, and livestock • Iceland was ruled by the Althing, an assembly of chieftains which met once a year	• Greenland was discovered by Erik the Red • Greenland imported wood, metal, and grain from Iceland and Europe • In return, Greenlanders exported walrus ivory and polar bear furs	• Erik's son, Leif Eriksson, attempted to settle in North America • He called the region Vinland and traded with Native Americans • This and later settlements failed however
VOCABULARY		

Assembly	A meeting to make decisions
Assimilated	Became similar to
Intermarriage	Marriage between different groups
Latrine	A basic toilet
Livestock	Farm animals kept for meat and dairy
Picts	People who lived in Scotland and the islands before the Vikings

Viking Expansion Year 10 OCRb GCSE History: 5. Viking Kings

13 Harald Bluetooth

Harald Bluetooth was a great warrior king who converted Denmark to Christianity

Christianity

- In 965, Harald was baptised as a Christian
- He forced the Danes to become Christian, although many still worshipped the old Viking Gods
- The grave site at Jelling contains evidence of Christian practices, including a wooden church and a the grave of Harald's father, Gorm the Old

Expanding his Kingdom

- Harald captured the region of Vik in Norway
- He moved the Danish capital to Roskilde to be nearer Norway
- He built bridges and roads to connect his Empire together
- He minted coins to improve trade

Defence

- To defend his kingdom, Harald built four large wooden forts
- He strengthened the Danevirke, a wall to defend against attack from German tribes
- Nevertheless, he was killed by his own son, Swein, who had risen in rebellion in 986

VOCABULARY

To be baptised	To officially become a Christian
Consolidated	Made more secure
Danes	People from Denmark
Jelling	A Viking grave site in Denmark
Minted coins	Produced coins
Tolerated	Put up with

14 Svein Forkbeard

Svein Forkbeard consolidated his father's kingdom and raided and invaded England

Consolidating power

- Like his father, Svein was a Christian king but he tolerated paganism
- He minted coins and protected merchants to improve trade
- In 1000, Svein defeated the King of Norway in battle and added a large part of Norway to his kingdom

Raiding England

- In 1002, King Athelred ordered the execution of all Vikings living in England in the St Brices Day Massacre
- In retaliation, from 1003 to 1013 Svein raided England constantly, burning towns like Norwich and Exeter
- The English gave thousands of pounds of jewellery and coins in Danegeld to stop Swein's attacks

Invading England

- In 1013 Svein invaded England with a huge fleet
- Aethelred fled to Normandy and Svein was crowned king
- Svein died just 5 weeks later and Aethelred was welcomed back as king by the English earls

15 Cnut the Great

Cnut became King of England and built a large Anglo-Scandinavian Empire

Seizing the English crown

- In 1015, Cnut sailed for England with 160 ships and 10,000 men
- In 1016 he fought a series of battles against Ethelred's son, Edmund Ironside
- After Ironside's death, Cnut became king of England

Ruling England

- Cnut defended England against further Viking attacks
- He executed English leaders and replaced them with Viking jarls, but there was no large scale settlement
- He increased taxes to pay for defence and worked hard to develop the Church

Anglo-Scandinavian Empire

- In 1017, Cnut married Emma of Normandy, creating an alliance with Normandy
- In 1018, Cnut became King of Denmark following the death of his brother, Harald
- In 1028, Cnut invaded Norway with a fleet of 50 ships and was named king

Year 10 Geography - The Challenge of Natural Hazards – Introduction and Tectonic Hazards

KPI1 – Key terms Conservative plate margin: Tectonic plate margin where two tectonic plates slide past each other. Constructive plate margin: Tectonic plate margin where rising magma adds new material to plates that are diverging (<i>going apart</i>). Destructive plate margin: Tectonic plate margin where two plates are converging (<i>coming together</i>). It can be linked to violent earthquakes and explosive volcanoes. Earthquake: A sudden or violent movement within the Earth's crust followed by a series of shocks. Immediate responses: The reaction of people as disasters happen in the immediate aftermath (<i>after-effects of an unpleasant event</i>). Long-term responses: Later reactions that occur in the weeks, months of years after an event. Monitoring: Recording physical changes, such as earthquake tremors (<i>ground shaking</i>) around a volcano, to help forecast when and where a natural hazard might strike. Plate margin: The margin (or boundary) between two tectonic plates. Planning: Actions taken to allow communities to respond and recover from natural disasters. Prediction: Attempts to forecast (predict) where and when a natural hazard might strike based on current knowledge. Primary effects: The initial impacts of a natural event on people and property, caused directly by it. Protection: Actions taken before a hazard strikes to reduce its impact, such as educating people. Secondary Effects: The after-effects that occur as indirect impacts of a natural event. Tectonic Hazards: A natural hazard caused by the movement of tectonic plates. Tectonic Plate: A rigid (<i>not flexible</i>) part of the Earth's crust which moves across semi-molten (<i>melted</i>) rock below.	KPI2: What are natural hazards? Definition: Natural hazards are physical events such as earthquakes and volcanoes that have the potential to do damage to humans and property. Hazards include tectonic hazards, tropical storms and forest fires. Hazards become risks when... - The population has grown. - Climate change is leading to more extreme weather events. - Wealth - LICs are particularly at risk as they do not have the money to protect themselves. KPI3 Plate tectonic theory Plate tectonic theory suggests that the outermost solid layers of the Earth (the crust) is divided into tectonic plates. There are two types of crustal plate. - Oceanic plate – recently formed, thin and dense (<i>heavy</i>) - Continental plate – older, thicker and less dense (<i>heavy</i>) What mechanisms drive plate movements? Tectonic plates are constantly moving due to: Convection currents: - The Earth's core is extremely hot which causes the mantle to be heated near the core. - The hot rock rises towards the surface and cools down. - When it reaches the crust, it is forced sideways because it cannot pass through the solid rock above. It continues to cool and become denser, and sinks back towards the crust. - Once more in contact with the core, it is re-heated and starts to rise to the surface again. Gravitational Sliding: Scientists believe that gravity plays an important role in plate movement – this is called gravitational sliding. There are two types of gravitational sliding. Ridge Push – At constructive plate margins, fresh magma rises at the mid-ocean ridge. The two plates are forced apart, away from the ridge. As the ridge rises at a higher than the ocean floor, gravity causes the plates to slide downwards. Slab Pull – at destructive plate margins, gravity acts upon the thicker, denser plate, causing it to sink under its own weight, 'pulling' the rest of the plate with it.	KPI5 – Plate margins Earthquakes occur along plate boundaries. On the edge of continents. Around the edge of the Pacific. Constructive plate margins – - At a constructive plate margin the plates move apart from one another, causing earthquakes. - When this happens the magma from the mantle rises up to make (or construct) new land in the form of a shield volcano. Destructive Plate Margin – - As the plates collide, the oceanic plate is forced beneath the continental plate. This is known as subduction. This happens because the oceanic plate is denser (heavier) than the continental plate. - When the plate sinks into the mantle it melts to form magma. The pressure of the magma builds up beneath the Earth's surface. The magma escapes through weaknesses in the rock and rises up to form a volcano. The volcanic eruptions are often violent. Conservative Plate Margin – - At a conservative plate margin, the plates move past each other or are side by side moving at different speeds. - As the plates move, friction occurs and plates become stuck. - Pressure builds up because the plates are still trying to move. When the pressure is released, it sends out huge amounts of energy, causing an earthquake. KPI6 – Effects from and responses to Earthquakes There are two different types of effects from natural disasters such as earthquakes. - Primary effects are caused by the ground shaking and can include deaths and injuries associated with the collapse of buildings and infrastructure such as roads. - Secondary effects are associated with events triggered by the ground shaking, such as landslides, avalanches, fires and deadly tsunamis. There are two different types of responses to natural disasters such as earthquakes. - Immediate responses: these initially focus on search and rescue and providing emergency resources such as water, food, medicine, shelter and safety. - Long term responses: These involve re-building and reconstruction, returning society to normal and reducing future risk. <table border="1" data-bbox="973 56 1284 1220"> <thead> <tr> <th></th><th>Nepal Earthquake (2015)</th><th>Christchurch Earthquake (2011)</th></tr> </thead> <tbody> <tr> <td>Primary Effects</td><td> 9000 people died and over </td><td> 185 people were killed. </td></tr> <tr> <td>Secondary Effects</td><td> - Avalanches on Mount Everest killed at least 19 people </td><td> - Christchurch was no longer able to host the rugby world cup match. </td></tr> <tr> <td>Immediate Responses</td><td> - Search and rescue teams arrived quickly from the UK, India and China. </td><td> 30,000 residents were provided with chemical toilets. </td></tr> <tr> <td>Long-term responses</td><td> - Over 7,000 schools to be re-built or repaired. </td><td> - The construction of around 10,000 affordable homes. </td></tr> </tbody> </table> KPI7 – Reducing the impact - Monitoring: Seismometers measure earth movement. Volcanoes give off gases. Protection: Reinforced buildings and making building foundations that absorb movement. Planning: Training for emergency services and planned evacuation routes and drills. Prediction: observing monitoring data, this can allow evacuation before event.		Nepal Earthquake (2015)	Christchurch Earthquake (2011)	Primary Effects	9000 people died and over	185 people were killed.	Secondary Effects	Avalanches on Mount Everest killed at least 19 people	Christchurch was no longer able to host the rugby world cup match.	Immediate Responses	Search and rescue teams arrived quickly from the UK, India and China.	30,000 residents were provided with chemical toilets.	Long-term responses	Over 7,000 schools to be re-built or repaired.	The construction of around 10,000 affordable homes.
	Nepal Earthquake (2015)	Christchurch Earthquake (2011)															
Primary Effects	9000 people died and over	185 people were killed.															
Secondary Effects	Avalanches on Mount Everest killed at least 19 people	Christchurch was no longer able to host the rugby world cup match.															
Immediate Responses	Search and rescue teams arrived quickly from the UK, India and China.	30,000 residents were provided with chemical toilets.															
Long-term responses	Over 7,000 schools to be re-built or repaired.	The construction of around 10,000 affordable homes.															

Page 2 Year 10 Geography - The Challenge of Natural Hazards – Weather Hazards

KPIB – Additional Key terms 1. Economic impact: The effect of an event on the wealth of an area or community. 2. Environmental impact: The effect of an event on the landscape and ecology of the surrounding area. 3. Extreme weather: When a weather event is significantly different from the average or usual weather pattern, and is especially severe or unseasonal. 4. Global atmospheric circulation: The worldwide system of winds, which transports heat from tropical to polar latitudes. 5. Management strategies: Techniques of controlling, responding to, or dealing with an event. 6. Social impact: The effect of an event on the lives of people or community. 7. Tropical storm: (hurricane, cyclone, typhoon) An area of low pressure with winds moving in a spiral around the calm central point called the eye of the storm. Winds are powerful and rainfall is heavy.	KPI9 – Global Atmospheric Circulation What causes wind? Wind is caused by differences in atmospheric pressure (<i>weight of the air</i>). When there is a difference air moves from one area of low pressure, resulting in winds. Solar Radiation: - Towards the poles, the Sun's energy spreads over a large area, resulting in low temperatures and high pressure. - At the Equator, the Sun's energy is concentrated over a small area, causing high temperatures and low pressure. This difference in air pressure on Earth's surface causes global patterns of air circulation (cells) from areas of high pressure to areas of low pressure.	KPI10 – Location of Tropical Storms Tropical storms will only form when the following conditions are met: 1. Ocean temperatures above 26.5°C 2. Water depth 60-70m 3. Between 5° and 30° north and south of the equator. 4. Tropical storms cannot form more than 30° north or south of the equator as the water is not warm enough and the Coriolis force (spin) is not great enough.	KPI12 – Tropical Storm Case Study: Typhoon Haiyan Typhoon Haiyan, a category five typhoon, struck the Philippines, close to Tacloban on 8th November 2013. Primary Effects: - Approximately 6,300 deaths 90% of Tacloban City destroyed 1.1 million tonnes of crops destroyed. Secondary Effects: - Looting (<i>robbing</i>) - Rice prices rose by 11.9% Immediate Responses - US aircraft carrier and helicopters helped with search and rescue 1200 evacuation centres set up - UK government sent shelter kits for families Long-term responses 'Cash for work' programmes -people paid to help clear debris - Oxfam replaced fishing boats - Rebuilt roads, bridges, airport...	KPI13 – Reducing the impact of tropical storms Tropical storms can be predicted, so having effective prediction, planning and protection systems can significantly reduce the effects of storms. 1. Prediction: Scientists use technology to predict when and where a storm is likely to occur. Hurricane warnings give people advice on the necessary actions to take e.g. evacuation. 2. Protection: Buildings can be constructed from reinforced concrete or built on stilts to protect against winds and flooding. 3. Planning: Disaster kits can be provided for people in high-risk areas. Evacuation routes can help to get people away from danger quickly.
	Global Atmospheric Circulation Model: 1. Warm air rises from the Equator, creating a belt of low pressure. As the air rises, it cools. 2. The resulting condensation creates clouds and rain that moves north and south of the Equator. 3. At 30° north and south of the Equator, the cold dry air sinks, creating high pressure and clear skies. 4. When the sinking air reaches the Earth's surface, it moves either back to the Equator or towards the Poles. 5. At 60° north and south of the Equator, the surface air meets colder air from the poles, which causes it to rise, creating a belt of low pressure. 6. The air rises and cools. At a high level, this moves either back to the Equator or towards the poles. 7. At the poles, the cool air sinks back to the Earth's surface, creating high pressure. The air then moves back towards the Equator.	KPI11 – Formation of Tropical Storms 1. Solar insolation heats the tropical water to above 26.5°C. 2. Warm, moist, unstable air above the ocean rises, creating an area of low pressure below. 3. The large mass of rising warm air cools and condenses to form large cumulonimbus clouds and heavy rain. 4. Surrounding cooler air is drawn into the area of low pressure, causing winds to form. 5. The system of clouds and winds spin due to the trade winds and the earth's rotation (Coriolis effect). Tropical Storms in the northern hemisphere move anticlockwise and those in the southern hemisphere move clockwise. 6. Colder drier air sinks into the center (eye) of the storm, creating calm conditions. 7. Prevailing winds push the storm towards the land. 8. The storm continues to get bigger and stronger until it reaches land or colder seas. Landfall and friction slow the storm down.	KPI14 – Evidence of UK Extreme Weather - Temperatures are becoming more extreme: 2014 was the warmest year since 1910 and December 2014 was the coldest month for over 100 years. - Rainfall is heavier and storms are more intense and frequent. December 2015 was the wettest UK month on record.	KPI15 – Extreme Weather in the UK Case Study: Beast from the East Under normal circumstances, winters in the UK are mild compared to some places on the same latitude because of the jet stream (a warm air mass). However, in February 2018, a weather event disturbed the jet stream – allowing cold winds from Russia to travel as far as the UK. Primary Effects - A man died in London after being pulled from a frozen lake, whilst there were 3 other reported deaths Secondary Effects - British Airways cancelled hundreds of short-haul flights from Heathrow, and London City - Hospitals in Glasgow, Grimsby, Scunthorpe and Goole cancelled all outpatient appointments while Harrogate hospital asked staff who can walk to work to go in to cover shifts Responses - Stranded drivers given foil blankets - Red weather warning -do not travel - Greas Delivery van gave out free food to stranded drivers on A1

Page 3 Year 10 Geography - The Challenge of Natural Hazards – Climate Change

KPI16 – Key words continued 1. Adaptation: Actions taken to adjust to natural events such as climate change, to reduce potential damage, limit the impacts, take advantage of opportunities, or cope with the consequences. 2. Climate change: A long-term change in the Earth's average temperature and weather patterns. 3. Mitigation: Action taken to reduce or eliminate the long-term risk to human life and property from natural hazards, such as building earthquake-proof buildings or making international agreements about carbon reduction targets. 4. Orbital changes: Changes in the pathway of the Earth around the Sun. 5. Quaternary period: The period of geological time from about 2.6 million years ago to the present. It is characterised by the appearance and development of humans and includes the Pleistocene and Holocene Epochs. 6. Epoch: a smaller period of time. 7. Enhanced Greenhouse effect: When there is an increased concentration of greenhouse gases in the atmosphere.	KPI17 – Evidence of Climate Change The Met Office has reliable climate evidence since 1914 – but we can tell what happened before that using several methods. • Ice and Sediment Cores: Ice sheets are made up of layers of snow, one per year. Gases trapped in layers of ice can be analysed. Ice cores from Antarctica show changes over the last 400 000 years. • Pollen Analysis: Pollen is preserved in sediment. Different species need different climatic conditions e.g. warmer/colder climates • Tree Rings: A tree grows one new ring each year. Rings are thicker in warm, wet conditions This gives us reliable evidence for the last 10 000 years • Temperature Records: Historical records date back to the 1850s. Historical records also tell us about harvest and weather reports.	KPI18 – Causes of Climate Change The evidence shows that the Earth's climate has changed both naturally but over the last 200 years human actions have led to the Enhanced Greenhouse Effect. Natural Factors: 1. Orbital changes – The Earth's orbit has changed from circular to elliptical, which affects its distance from the Sun. When the orbit is more circular, the temperature will increase as the Earth is closer to the Sun. When the orbit is elliptical, the temperature will decrease as the Earth is further from the Sun. 2. Volcanic Activity – Volcanic eruptions release particles of Sulphur Dioxide which reflect the Sun's rays, reducing temperatures. It also releases carbon dioxide which traps the Sun's heat resulting in warmer temperatures. 3. Solar Output – The Sun's solar energy output varies over time. More sunspots can mean that temperatures increase. Human Factors: 1. Fossil fuels – burning fossil fuels release carbon dioxide into the atmosphere 2. Agriculture – livestock and rice farming produce methane into the atmosphere. 3. Deforestation – Burning wood releases carbon dioxide into the atmosphere. All these methods lead to the Enhanced Greenhouse Effect which is where: 1. The Sun's solar radiation reaches the Earth's surface where most is absorbed. 2. The radiation is trapped by the additional greenhouse gases such as methane and carbon dioxide.	KPI19 – Effects of Climate Change General Effect: - Sea level rise leads to flooding and coastal erosion. - Sea level rise leads to flooding and coastal erosion. - Warmer rivers affect marine wildlife. Specific Example: The Maldives are a group of small islands in the Indian Ocean some 500km west of India. Some climate models suggest that the islands may be uninhabitable by 2040 and submerged by 2100. The current 380,000 inhabitants have a very uncertain future as sea levels rise.
			KPI20 – Managing Climate Change Mitigation: Strategies which aim to reduce the causes of global warming by reducing the concentration of greenhouse gases in the atmosphere. Examples: - Alternative energy production: Using nuclear power, hydroelectric power and solar power releases less greenhouse gases than burning fossil fuels. - International agreements: Countries agree common policies such as reducing greenhouse gases by a set amount by a certain date. The Paris Agreement (signed by over 170 countries) is one of the main agreements. - Planting trees: Reforestation aims to reverse deforestation by planting trees. - Carbon Capture and storage: Involves capturing Co2 released by industry of through burning fossil fuels and then storing it underground. According to the International Energy Agency, CCS can provide 20% of carbon cuts needed by 2050. Adaptation: Strategies that aim to limit the negative effects of climate change on humans. Examples: - Changing Agricultural Systems: Modifying (<i>changing</i>) farming to cope with the changing temperatures and rainfall. - Managing Water Supplies: Ensuring that all areas can access water by using water efficient devices and increasing supply through desalination plants. Additionally Ice Stupas can be used (<i>artificial glaciers</i>) to ensure all places can access water, - Reducing risk from rising sea levels would involve constructing defences such as the Thames Flood Barrier or restoring mangrove forests in Maldives, or raising buildings on stilts.

Year 10 – Physical Landscapes in the UK – River Landscapes

Key words:

- Hard engineering Involves the building of entirely artificial (man made) structures using various materials such as rock, concrete and steel to reduce, disrupt or stop the impact of river processes.
- Hydraulic action The force of the river against the banks can cause air to be trapped in cracks and crevices. The pressure weakens the banks and gradually wears it away.
- Hydrograph A graph which shows the discharge of a river, related to rainfall, over a period of time.
- Interlocking spurs A series of ridges projecting out on alternate sides of a valley and around which a river winds its course.
- Lateral erosion Sideways erosion by a river on the outside of a meander channel. It eventually leads to the widening of the valley and contributes to the formation of the flood plain.
- Levees Embankment of sediment along the bank of a river. It may be formed naturally by regular flooding or be built up by people to protect the area against flooding.
- Long profile The gradient of a river, from its source to its mouth.
- Meander A pronounced bend in a river.
- Ox-bow lake An arc-shaped lake which has been cut off from a meandering river.
- Precipitation Moisture falling from the atmosphere - as rain, hail, sleet or snow.
- Saltation Particles bouncing down the river bed.
- Soft engineering Involves the use of the natural environment surrounding a river, using schemes that work with the river's natural processes.
- Solution Soluble particles are dissolved into the river. (Channel) straightening Removing meanders from a river to make the river straighter this allows it to carry more water quickly downstream, so it doesn't build up and is less likely to flood.
- Suspension Fine solid material held in the water while the water is moving.
- Traction The rolling of boulders and pebbles along the river bed.
- Vertical erosion Downward erosion of a river bed
- Waterfall Sudden descent of a river or stream over a vertical or very steep slope in its bed. It often forms where the river meets a band of softer rock after flowing over an area of more resistant material

KPI 1 To describe how the long profile changes

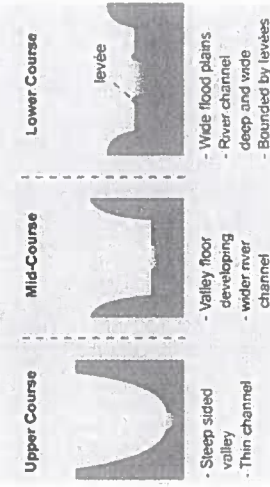
The long profile of a river refers to the changes in elevation from the source to the mouth.

- Upper Course: close to the source, the river tends to have a steep gradient, resulting in a rapid flow. The river channel is often narrow and shallow, with rocky or uneven terrain. This section is characterized by vertical erosion as the river cuts through the underlying rock and creates a V-shaped valley. Waterfalls, rapids, and gorges are common features in the upper course.
- Middle Course: As the river progresses into the middle course, the gradient becomes less steep. The river channel widens, and the flow of water becomes more meandering. The dominant erosional process shifts from vertical erosion to lateral erosion. The river starts to erode the valley sides and transport sediments downstream. Floodplains and meanders (bends in the river) begin to form in this section. The valley widens, and the river becomes deeper and wider.
- Lower Course: In the lower course, near the mouth of the river, the gradient is very gentle. The river channel becomes wider and deeper, and the flow slows down. Deposition becomes the dominant process, as the river has less energy to transport its load. As a result, the river deposits sediments, creating a wide floodplain. Meanders are well-developed, and oxbow lakes (abandoned meander loops) may be present. The river may also split into several distributaries as it enters the sea or a large body of water.

KPI 2 To describe how the cross profile of a river and its valley changes continued

- The cross profile of a river refers to the shape of the river channel and its valley from one bank to the other. The cross profile changes as the river progresses from the upper course to the lower course.
- Upper Course: In the upper course, the cross profile is typically narrow and V-shaped. The river channel is narrow, with steep valley sides. The river channel is often rocky, with rapids and waterfalls present. The valley sides are steep and may have interlocking spurs, which are ridges of hard rock that jut out into the valley.
- Middle Course: In the middle course, the cross profile becomes wider and more gently sloping. The river channel meanders within the valley, creating a wider floodplain. The valley sides are less steep and may feature gentle slopes or bluffs. Point bars (depositional features) can form on the inside of meander bends, while cut banks (erosional features) can be found on the outside of bends.
- Lower Course: In the lower course, the cross profile is the widest and flattest. The river channel is broad, and the valley sides are gentle. Floodplains are extensive, and the river may have multiple channels or distributaries. Natural levees, formed by successive flooding and deposition of sediments, can be found along the riverbanks.

The actual characteristics of a river and its valley can vary depending on local geology, climate, and other factors.



KPI 3 To explain how a river erodes

A river erodes by wearing away the land and rocks in its path. It does this through different processes:

- Hydraulic Action: The river's moving water can be very powerful, like a bulldozer. It pushes against the riverbanks and riverbed, causing bits of the land to break off and get carried away by the water.
- Abrasion: As the river flows, it carries tiny rocks, sand, and pebbles. These particles act like sandpaper, rubbing against the riverbanks and riverbed.
- Attrition: When the rocks, sand, and pebbles are being carried by the river, they bump into each other and they start to break into smaller pieces. The rocks in the river gradually become smaller and rounder as they keep bumping into each other.
- Solution: River water can dissolve certain types of rocks and minerals that it comes into contact with. Some rocks, like limestone, are made up of minerals that easily dissolve in water. When a river flows over or through these rocks, the water can react chemically with the rock and make it dissolve.

KPI 4 To explain how a river transports

- Traction: Larger, heavier materials like rocks and pebbles are rolled or pushed along the riverbed by the force of the water.
- Saltation: Smaller particles like sand and gravel are lifted up and bounced along the riverbed in a hopping motion before settling back down.
- Suspension: Fine particles like silt and clay are carried within the water, staying suspended and moving with the flow.
- Solution: Some dissolved minerals are transported within the river water itself, without being visible.

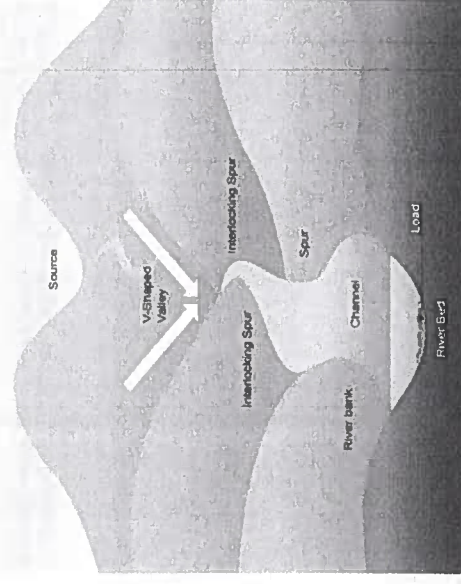
As the river flows, it carries its load downstream. The speed and strength of the river's current determine how much load it can transport. During floods or heavy rainfall, when the river's flow is faster and stronger, it can carry more material

Year 10 – Physical Landscapes in the UK – River Landscapes

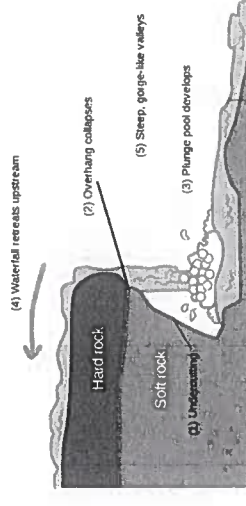
KPI 5 Describe the formation of interlocking spurs

Interlocking spurs are landforms that occur in the upper course of a river and are shaped by the river's erosion and the resistance of the surrounding rock

1. In the upper course of a river, the land is usually steep and uneven. As the river flows downhill, it encounters resistant rock outcrops or harder areas that are more difficult to erode.
2. The river's erosional processes, such as hydraulic action and abrasion, begin to wear away the less resistant rock layers. Over time, the river cuts a narrow and deep channel through the softer rock, forming a V-shaped valley.
3. As the river continues to erode the valley, it encounters areas of more resistant rock. Instead of cutting straight through these areas, the river is forced to flow around them, creating bends or meanders.
4. The river follows the path of least resistance, meandering around the hard rock areas, which act as obstacles. The river winds its way in a zigzag pattern, flowing around one side of the resistant rock and then switching to the other side.
5. As the river flows around these resistant rock features, it leaves behind sections of less eroded land that project out into the valley. These are called interlocking spurs. They appear like a series of projections or fingers that interlock with each other, extending from the valley sides into the river channel.



KPI 6 To describe and explain the formation of waterfalls and gorges



1. Step 1 - Differential Erosion: The formation of a waterfall begins with the presence of alternating layers of hard and soft rock in the river's course.
2. Step 2 - Erosion of the Soft Rock: As the river flows over the less resistant rock, such as softer sedimentary rock or clay, it erodes it more easily through processes like hydraulic action and abrasion. The continuous flow of water gradually undermines the softer rock, creating a plunge pool at the base.
3. Step 3 - Overhang Formation: Over time, the erosion of the softer rock creates an overhang or an unsupported ledge of the resistant rock above it. The overhang becomes more pronounced as the soft rock erodes at a faster rate compared to the resistant rock.
4. Step 4 - Plunge Pool Formation: The erosion process causes the waterfall to retreat upstream, as the soft rock gets worn away by the plunge of the falling water. As the water plunges from the overhang, it creates a powerful force that erodes and deepens a plunge pool at the base of the waterfall.
5. Step 5 - Recession of the Waterfall: Over time, the continued erosion of the soft rock and the undercutting of the resistant rock cause the overhang to become unsupported. Eventually, the overhang collapses, and the waterfall retreats further upstream. This process continues, leading to the backward migration of the waterfall.
6. Step 6 - Gorge Formation: As the waterfall retreats, it leaves behind a steep-sided gorge in the river's course. The process of vertical erosion by the falling water creates a deep, narrow channel downstream of the waterfall.

KPI 7 To describe and explain the formation of meanders and ox-bow lakes

1. Formation of a Meander: A meander is a bend or curve in a river's course. Initially, the river may flow in a relatively straight path. However, as it travels across a floodplain or through an area with more easily erodible sediment, the river begins to erode laterally (sideways).
2. Erosion on the Outside Bend: The fastest flow of water occurs on the outside bend of a meander. As a result, the river's erosional forces, such as hydraulic action and abrasion, are concentrated on the outer bank of the bend. The water's force erodes and undercuts the bank, creating a river cliff or a steep slope.
3. Deposition on the Inside Bend: On the inner bank of the meander bend, the flow of water slows down. This slower flow allows for deposition to take place. The river deposits sediment, such as sand, silt, and clay, on the inside bank, creating a gently sloping feature called a slip-off slope.
4. Meander Migration: Over time, erosion and deposition cause the meander to migrate downstream. The erosion of the outer bank creates a wider bend, while the deposition on the inner bank makes the opposite side more pronounced.
5. Neck Formation and Oxbow Lake Formation: As the meander continues to migrate, the neck of the meander, the narrow strip of land between the two bends, becomes narrower. Eventually, due to erosion and natural processes, the river may cut through this narrow strip of land during a flood event, creating a new straighter channel.
6. Oxbow Lake Formation: Once the river has cut through the neck, it takes a shorter, straighter path. The abandoned meander bend is now called an oxbow lake. The oxbow lake is often crescent-shaped and remains filled with water, separated from the main river channel. Over time it may fill with sediment, vegetation may grow in it, and it may eventually become a marsh or a meadow.

Year 10 – Physical Landscapes in the UK – River Landscapes

KPI 8 To explain how a levees is formed

Levees are natural embankments or raised banks that are formed alongside a river channel.

Step 1 - Flooding and Deposition: Levees are typically formed during periods of flooding when the river's water level rises and exceeds the capacity of the river channel. During a flood, the river carries a large volume of sediment, including sand, silt, and clay.

Step 2 - Loss of Velocity: As the river floods, the water spreads out over the floodplain, and its velocity decreases. The slower-moving water loses its ability to carry and transport sediment, causing the sediment to settle or deposit along the edges of the river channel.

Step 3 - Coarse Sediment Deposition: Due to the loss of velocity, the first sediments to be deposited are the larger and coarser particles, such as sand and gravel. These materials are deposited closest to the river channel, forming a layer of coarser sediment.

Step 4 - Fine Sediment Deposition: Beyond the layer of coarser sediment, finer particles like silt and clay settle out of the water as the velocity decreases even further. These finer sediments settle on top of the coarser layer, gradually building up the levee's height.

Step 5 - Repeated Flooding Events: Over time, with each recurring flood event, additional layers of sediment are deposited on top of the existing levee. This process results in the gradual growth and heightening of the levee.

Step 6 - Vegetation Colonization: As the levee builds up, it becomes a raised and relatively stable area compared to the surrounding floodplain. This makes it more suitable for the growth of vegetation, such as grasses and shrubs. The vegetation helps to stabilize the levee by further trapping sediment and reducing erosion.

Step 7 - Reinforcement: As the levee becomes vegetated, the roots of the plants bind the sediment together, strengthening the structure and making it more resistant to erosion.

KPI 9 Describe the formation of floodplains and estuaries

Floodplain Formation:

- **Step 1: Erosion and Deposition:** Floodplains are created by the erosion and deposition of sediment by a river over time. In the upper course of a river, erosion processes like hydraulic action and abrasion remove material from the riverbed and banks. This eroded material, such as sand, silt, and clay, is then transported downstream.

- **Step 2: Deposition on the Floodplain:** As the river reaches the middle and lower courses, its velocity decreases, and it loses its ability to carry the sediment. The sediment is then deposited on the floodplain during periods of flooding. Floods occur when the river's water level exceeds its channel capacity, and the excess water spreads out onto the adjacent land.

- **Step 3: Building Up of Sediment Layers:** Each time a flood occurs, a new layer of sediment is deposited on the floodplain. Over time, this accumulation of sediment builds up the height and extent of the floodplain.

- **Step 4: Formation of Natural Levees:** During flooding events, the river's water velocity decreases, causing sediment to be deposited near the river channel. Coarser particles, such as sand and gravel, are deposited closest to the channel, forming natural embankments known as levees. These levees help confine the river within its channel during subsequent floods.

Estuary Formation:

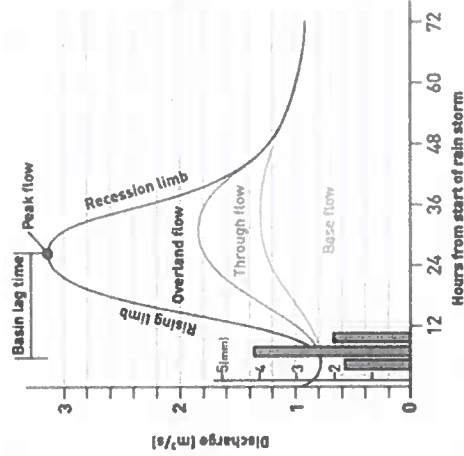
- **Step 1: An estuary is formed at the point where a river meets the sea or ocean.** The river carries sediment and freshwater downstream, while the sea or ocean brings in tidal currents and saltwater.

- **Step 2: As the river flows into the estuary, the slower-moving water loses its capacity to transport sediment.** This leads to the deposition of fine sediment, such as silt and clay, within the estuary.

- **Step 4: Tidal currents play a significant role in shaping estuaries.** As tides rise and fall, they cause the water to move in and out of the estuary, resulting in the erosion and deposition of sediment. The tidal currents can create channels, sandbars, and tidal flats within the estuary.

- **Step 5: Development of Salt Marshes and Mudflats:** The deposition of sediment and the interaction of freshwater and saltwater create favourable conditions for the growth of salt-tolerant vegetation, such as salt marsh grasses. Salt marshes and mudflats are common features in estuaries, providing habitats for a variety of plant and animal species.

KPI 10 To describe how hydrographs to show the relationship between precipitation and discharge



Hydrographs are graphs that show the flow or discharge of water in a river over a specific period of time, usually in response to a rainfall event:

Discharge: Discharge refers to the volume of water passing through a specific cross-section of the river per unit of time.

Rising Limb: The rising limb of the hydrograph represents the increasing flow of water in the river following the onset of rainfall. As the rainfall infiltrates the ground and generates surface runoff, the river's discharge begins to rise.

Peak Flow: The peak flow is the highest point on the hydrograph and represents the maximum discharge reached during the rainfall event. It indicates the intensity of the rainfall and the river's response to it.

Lag Time: Lag time is the time delay between the peak rainfall and the peak flow in the river. It reflects the time it takes for the rainfall to reach the river, considering factors such as the rainfall intensity, soil conditions, and river characteristics.

Falling Limb: The falling limb of the hydrograph represents the decrease in river discharge following the cessation of rainfall. As the rainfall stops and the runoff diminishes, the river's discharge gradually returns to its base flow or pre-rainfall level.

Base Flow: The base flow represents the normal or background discharge of the river during non-rainfall periods. It is the flow sustained by groundwater sources and other ongoing inputs to the river.

KPI 11 To identify the factors that can affect flood risk

Several factors can affect flood risk in a particular area.

Natural Factors:

- **Precipitation:** The amount, intensity, and duration of rainfall are significant factors in flood risk. Heavy or prolonged rainfall can lead to increased runoff and overwhelm the capacity of rivers and drainage systems to handle the water, resulting in flooding.
- **Drainage Basin Characteristics:** The characteristics of the drainage basin, such as its size, shape, slope, and vegetation cover, influence how water is collected and transported within the basin. Areas with larger drainage basins, steep slopes, or insufficient vegetation cover are more prone to rapid runoff and increased flood risk.

Human Factors

- **Urbanisation and Land Use:** The construction of buildings, roads, and other impervious surfaces reduces the natural infiltration of water into the soil, leading to increased surface runoff and a higher likelihood of flooding.
- **Deforestation:** deforestation less vegetation to intercept precipitation leads to increased surface run-off

Year 10 – Physical Landscapes in the UK – River Landscapes

KPI 12 Describe and explain the costs and benefits of hard engineering

Hard engineering refers to the use of artificial structures and techniques to manage and control the flow of rivers and prevent flooding.

Method	Benefits	Disadvantages
Dams and reservoirs (hard)	Reservoirs store water reducing the volume of water downstream. Water can be used for drinking and HEP.	Dams are very expensive to build and reservoirs can flood existing settlements. Material is deposited in the reservoir affecting farmland downstream
Channel straightening (hard)	Water moves quickly reducing the risk of flooding	Flooding risk and erosion rates increase downstream as the water is moving faster.
Embankments (hard)	Increasing the volume of the channel	Very expensive and they can break

KPI 13 Restore rivers and their surrounding areas. Unlike hard engineering, which relies on artificial structures, soft engineering aims to work in harmony with the natural environment to achieve sustainable river management

Method	Benefits	Disadvantages
Flood warnings (soft)	People have time to move belongings upstairs and evacuate	They don't prevent flooding and people may not hear them
Flood plain zoning (soft)	The risk of flooding is reduced as building work does not happen on the floodplain	Space is limited in some urban areas which can cause conflict and some floodplains are already built on
Afforestation (soft)	Interception increases which reduces discharge. Creates habitats.	Less land available for farming
River restoration (soft)	Removing land made levees allows flood plains to flood. River is in its natural state	Local flood risk increases if nothing else is done

KPI 14 Describe an example of a flood management scheme in the UK

Location: located in Oxfordshire, England

Why was the Banbury Flood Management Plan needed? Banbury has been affected by flooding of the River Cherwell numerous times. The 1998 flood led to the closure of the railway station and caused £12.5 million in damage. There was further flooding in 2007.

What is the Banbury Flood Management Plan? 2012 construction of flood storage reservoir costing £18.5 mill.

The key features of the scheme included: raising the A36, constructing new pumping stations to transfer water, controlling the flow of the River Cherwell through the Hardwick and Huscote flow control structures, a biodiversity Action Plan (BAP) habitat with ponds, trees and hedgerows, constructing 4.5m high embankments using soil taken from the borrow area, which is now a small reservoir used for storing water that would otherwise have caused the River Cherwell to flood

What issues resulted from the scheme?

Social	Economic	Environmental
- The A361 is no longer affected by flooding, reducing transport disruption for local people. - The new green areas and footpaths have improved the quality of life for local people. - Reduced anxiety in local communities as the risk of flooding has been reduced.	- The cost of the scheme was £18.5 million. - The benefits are estimated at over £100 million. 441 houses and 73 commercial properties are protected from flooding. - Property values have increased as they are no longer at risk of flooding.	- Around 100,000 tonnes of earth were required to make the embankment resulting in some habitat destruction. - The Biodiversity Action Plan (BAP) has resulted in planting trees and hedgerows and constructing ponds. - The BAP has created new ponds, trees and hedgerow habitats. - Part of the floodplain will be left to flood if river levels get too high. - The reservoir provides a temporary habitat for waterbirds.

Year 10 Term 2 French – Ma vie scolaire + En pleine forme

10	Next year I am going to continue to improve my French.	L'année prochaine je vais continuer à améliorer mon français.
11	For breakfast I drink coffee.	Pour le petit-déjeuner je bois du café.
12	In the evening, we eat fish and vegetables.	Le soir, on mange du poisson et des légumes.
13	I am sad because I don't get on well with my dad.	Je suis triste car je ne m'entends pas bien avec mon père.
14	I am stressed all the time with exams.	Je suis tout le temps très stressé(e) avec les examens.
15	Can I help you?	Je peux vous aider?
16	I'm ill and I have a headache.	Je suis malade et j'ai mal à la tête.
17	I am going to eat more fruit.	Je vais manger plus de fruits.
18	I am going to be more patient with my sister.	Je vais être plus patient(e) avec ma soeur.
19	When I was a teen, I didn't have a lot of friends.	Quand j' étais ado, je n'avais pas beaucoup d'amis.
20	I wasn't happy.	Je n'étais pas heureux (euse).

1	My favourite subject is drama.	Ma matière préférée c'est le théâtre.
2	I love to sing and I am good at it.	J' adore chanter et je suis fort(e) en ça.
3	You must not use your mobile in class.	Il ne faut pas utiliser son portable en classe.
4	It's unfair because it is useful for schoolwork.	C'est injuste parce que c'est utile pour le travail scolaire.
5	I've learnt a lot of things	J' ai appris beaucoup de choses.
6	He never forgot his homework.	Il n'a jamais oublié ses devoirs
7	My primary school was called Saint Theresa.	Mon école primaire s'appelait Saint Thérèse.
8	When I was little , I used to like English.	Quand j' étais petit(e) , j' aimais l'anglais.
9	Before, I used to live in the north of Scotland.	Avant, j' habitais dans le nord de l'Écosse.

Show off language

Opinion Phrases

j'estime que – I think that
 ce que j'aime le plus est- What I like the most is
 ça me plait parce que- I like it because
 j'ai peur de (voler)- I'm scared of (flying)
 c'est meilleur que- it's better than
 c'est pire que- it's worse than
 j'ai toujours rêvé de (+ infinitive)- I've always dreamed of

Infinitive Phrases

on peut + infinitive – you can
 pour + infinitive – In order (to)
 je préfère + infinitive – I prefer (to)
 je dois + infinitive- I must
 il faut + infinitive- I/We have to

je voudrais + infinitive – I would like (to)
 j'aimerais bien + infinitive – I would really like (to)
 ce serait bien de + infinitive – It would be good (to)

Connectives

pourtant/cependant-however
 donc – therefore
 par exemple- for example
 y compris- including
 après avoir fait cela- After having done that

Example of what LSQs
 for MFL should look like:

3 mins prep		10 mins create quiz		3 mins review		2 mins check & correct	
Questions				Answers – Test yourself			
1	Here is a town which calls itself (in called) York	J'habite dans une ville qui s'appelle York					
2		J'habite dans une ville qui s'appelle York					
3		J'habite dans une ville qui s'appelle York					
4	and which finds itself (is located) in the South-west of England	et qui se trouve dans le sud-ouest de l'Angleterre					
5		et qui se trouve dans le sud-ouest de l'Angleterre					
6		et qui se trouve dans le sud-ouest de l'Angleterre					
7		et qui se trouve dans le sud-ouest de l'Angleterre					
8	It's a small town near the Bristol	C'est une petite ville près de Bristol					
9		C'est une petite ville près de Bristol					
10		C'est une petite ville près de Bristol					
Additional Homework				Book / un not a number Pages Read 200-205 Signed			

1	My grandfather is cooking food in the kitchen.	Mi abuelo está cocinando comida en la cocina.
2	I am like my dad because we are both tall.	Soy como mi padre porque los dos somos altos.
3	I'm interested in fashion and art.	Me interesan la moda y el arte.
4	I follow writers on social media.	Sigo escritores en las redes sociales.
5	I get on very well with my best friend.	Me llevo superbien con mi mejor amigo.
6	We have a lot in common.	Tenemos mucho en común.
7	I think that I am hardworking and responsible.	Pienso que soy trabajador(a) y responsable.
8	I use social media to share photos.	Uso las redes sociales para compartir fotos.
9	Young people spend too much time online.	Los jóvenes pasan demasiado tiempo en línea.
10	The internet can have negative effects on one's health.	El internet puede tener efectos negativos en su salud.
11	I have a healthy life and a good diet.	Tengo una vida sana y una dieta buena.
12	I get up early and I do exercise.	Me levanto temprano y hago ejercicio.

13	I have breakfast at seven in the morning.	Tomo el desayuno a las siete de la mañana.
14	My favourite dinner is fish and vegetables.	Mi cena favorita es pescado con verduras.
15	In the past, I used to do swimming.	En el pasado, hacía natación.
16	I used to be active and I used to have lots of energy.	Era activo(a) y tenía mucha energía.
17	I am ill. I have a headache.	Estoy enfermo(a). Tengo dolor de cabeza.
18	My ears really hurt me.	Me duelen mucho los oídos.
19	If I stop eating fast food	Si dejo de comer la comida rápida
20	I will sleep better and I will have more energy.	Dormiré mejor y tendré más energía.

MFL key classroom language:

Key Word	Student-friendly definition	Example
Infinitive	In English it is always accompanied by the word "TO". In Spanish, it always finishes in "R" (-ar/-er/-ir) E.g: to play, to do, to go, to visit. jugar/ hacer / ir / visitar	An opinion is always followed by an infinitive: Me gusta jugar/ hacer/ comprar I like to play/to do/to buy After suelo/solia, you always need an infinitive: suelo ver /jugar/descansar I tend to watch/to play/to rest
Cognate	A word that is similar in spelling and meaning in two languages,	This word is a cognate, what do you think it means? e.g. ciclismo = cycling
Connectives	A word that links two sentences or ideas together, e.g. y/por otro lado	What connective can we use to link these two sentences? - Me gusta la historia (pero) odio el inglés - I like history but I hate English
Intensifiers	A word that strengthens the meaning of other expressions and shows emphasis, e.g. muy/bastante	Every time you write an adjective, make sure you use an intensifier before it. - Creo que las ciencias son muy interesantes - I think science is very interesting

Example of a French/Spanish LSO:

Questions	Answers - Test Yourself
1. I live in a town which calls itself (is called) York	J'habite dans une ville qui s'appelle York
2.	J'habite dans une ville qui s'appelle York
3.	J'habite dans une ville qui s'appelle York
4. and which finds itself (is located) in the South-west of England	et qui se trouve dans le sud-ouest de l'Angleterre
5.	et qui se trouve dans le sud-ouest de l'Angleterre
6.	et qui se trouve dans le sud-ouest de l'Angleterre
7.	et qui se trouve dans le sud-ouest de l'Angleterre
8. it's a small town near the Bristol	C'est une petite ville près de Bristol
9.	C'est une petite ville près de Bristol
10.	C'est une petite ville près de Bristol
Additional Homework	Book / un not a number Pages Read 200 - 235 Signed

Art Year 10 - Term 2 - Collections

<u>Formal Elements</u>	<u>Colour Theory</u>	<u>Tips, Tools & Techniques</u>	<u>Keywords, Concepts & Artists</u>
Line A mark that connects two or more points. These can be straight, curved, short or long. Tone The lightness or darkness or something. For darker tones use a higher grade B pencil. Colour Colour is what you see when light reflects of something. Texture How something looks or feel e.g. fluffy, rough, smooth etc. Visual Texture - implied sense of texture that the artist creates through the use of various artistic elements such as line , shading, and color. Physical Texture - texture you can actually feel with your hand Pattern A symbol, shape or colour that repeats. Man-made patterns are designed by humans, natural patterns are formed by nature. Shape/Form Shape is 2D e.g. rectangles. Form is 3D e.g. cubes, spheres etc.	Primary Colours Colours that can't be mixed/ made from other colours e.g. red, yellow and blue. Secondary Colours Colours that can be made by mixing two primary colours. Red + Blue = Purple Yellow + Blue = Green Yellow + Red = Orange Tertiary Colours Colours that can be made by mixing a primary and secondary colour together e.g. Blue + Green = Turquoise. Complementary Colours Colours that are opposite each other on the colour wheel. Blue & Orange Red & Green Purple & Yellow Analogue/ Harmonious Colours Colours that are next to each other on the colour wheel e.g. Red, red-orange and orange. Tints/ Shades Tint - Adding white to a colour to make it lighter. Shades - Adding black to a colour to make it darker.	Grid-Method A method of drawing to recreate, enlarge or reduce an image ensuring accurate proportions. Mono-Printing A form of printmaking that has lines or images that can only be made once. Shading Techniques Hatching, Cross-Hatching, Stippling and Scumbling. Blender Stick A paper stump that allows you to blend tones. Acrylic Paint A water-soluble paint which can be layered due to quicker drying time without muddying previously applied layers. Thumbnail Designs Small sketches outlining ideas in a simplistic way. Fragmentation The process of splitting an image into different sections. Thumbnail Design Small uncomplicated sketches which can be used to test out different ideas and compositions.	Proportion The size and relation of objects to one another. Using the grid-method is one way of helping you draw using accurate proportions. Composition This is where you place objects on a page. You can explore different layouts such as close up, far away, busy, quiet, off centred, clustered. Mixed Media Artwork in which more than one material has been used. Copy of Work Copying the style and technique of an artist's work to enable you to understand the process of how it has been made. Own Interpretation Developing your own work by applying artist style or technique to your own ideas. Refining Ideas Annotating and evaluating experiments and as a result making decisions to improve work. Negative Space Negative space is the empty or unused space around and between the subject of an image or design

Painting Techniques	More Painting Techniques	More Keywords
Impasto Paint is laid on an area of the surface in very thick layers, usually thick enough that the brush or painting-knife strokes are visible. Sgraffito Scratching away paint while it's wet to expose the underpainting. It's especially useful when depicting scratches, hair, grasses and the like. You can use almost any pointed object for this – try rubber shaping tools or the end of a brush Dry Brushing This is a method of applying colour that only partially covers a previously dried layer of paint. Add very little paint to your brush and apply it with very quick, directional strokes. This method tends to work best when applying light paint over dark areas/dried paint and is useful for depicting rock and grass textures. Wet-in-Wet Start by brushing water (and only water) onto your paper. Then dip your brush in paint and spread it over the water wash. The paint will feather and diffuse like magic.	Adding texture with Salt When salt is sprinkled on a wet wash, it starts to gather the watercolour pigments and makes the coolest texture. The effect will vary depending on the size of the grains of salt and the wetness of the paper Underpainting An underpainting is essentially a monochrome wash that's used for the first layer of the painting. You'll add layers of transparent washes over the underpainting, which gives realistic and luminous effects	Observational Drawing Drawing something from real life in front of you. Primary & Secondary Sources Primary = real objects or your own photos that you have taken yourself Secondary = an image from the internet or books Landscape A piece that depicts a view of some sort e.g. mountains, the sea, fields, woodlands, buildings etc. Portraiture Drawing/ painting or photograph of someone Still Life A piece that depicts an object or group of objects.

Billy Elliot plot

Billy Elliot is set in the county town of Durham. It follows the story of a young boy who discovers he has a love for dance, yet he faces a backlash from his family and the community he lives in.

The play is set during the 1980's Miners strike. It is a musical which makes many reference to the conservative government at the time.

The performance starts with the audience being informed that the Miners are going on strike. We then are introduced to the main character and his best friend Michael, who don't seem to understand what is happening around them.

We learn that Billy lives with his Dad, Brother and Grandma, his mam passed away a few years ago.

After arriving late to a boxing class he is forced to stay behind. A ballet class then enters the hall and he takes part. As the show goes on he stop going to boxing and continues to go to the ballet class. The dance teacher, Mrs Wilkenson, convinces Billy to Audition for the Royal Ballet school. However, is firstly denied by his family. Due to the on going circumstances with the strike.

After some time his dad goes against his community and family and supports Billy in his dream. Billy auditions and gets into the Ballet school.

The performance ends with the Miners finding out that they have lost their fight against the government and are forced back to work.

Background of the play

Written by Lee Hall, Billy Elliot is set at a time when English communities were divided by the political landscape at the time. Lee Hall was raised in Newcastle which was an area hit hard by the mining strikes of the time.

Throughout the whole performance the theme of social class is very apparent. There are many instances of the issues faced by working class communities highlighted throughout the performance. An example of this is during the song Solidarity. We see the struggle between Miners and Police officers who are clashing on the picket line. This is combined with a ballet class, showing us the innocence of the children and Billy, while such turmoil is happening around them.

There was a large gap between working and middle class in Britain, even before the industrial decline. The Miners and the police are class stereotypes. A lot of working class people struggles financially, even if they were in work or on the dole. The Middle class were largely unaffected by the industrial decline and strikes at the time. There was also a class divide in education, whether you went to a public and private schools often decided your job in the future. We can see this when Billy goes to audition for the Ballet School.

Families were expected to have a 'nuclear' structure- a mother, a father and their children. Single-parent families like Billy's were very uncommon and he finds a mother like figure in Mrs Wilkenson.

Key Terms

Foreshadowing - Warning or indication of a future event

Pathos - Appeal to emotion

Multi-role- One actor playing a two or more roles

Motif- A repeated idea throughout the story

Dialogue - Conversation between two or more characters

Tension - Dramatically used to build suspense

Humour - Language used for amusing/comic effect

Dramatic Irony - When the audience know something that the characters do not

Songs - Contain lyrics that are set to music to give audience more information

Stage Directions - Instructions indicating how the actor should move/speak

Cyclical Structure - Finishes a similar way to how the text began

Prologue - A separate introduction that reveals some of the plot

Atmospheric - A distinctive mood/feel to the scene

Parallels - Similarities in the text—almost a replication of events

Tragedy - A play dealing with tragic events and having an unhappy ending for main characters.

Performance Style

Billy Elliot is a Musical. Meaning it regularly has songs which forward the performance. With most musicals the performance will end on a positive note dispute what has happened in the show.

Epic Theatre is another style used in this performance, it is a theatre style created by Bertolt Brecht to push a political message and highlight issues within society.

Billy Elliot is extremely political, with many references to the conservative government during the 1980's. The audience see the struggle that many people went through. There is also mention of real people, which again makes the performance Epic theatre.

Gestus and Spass is also used in this performance. This can be clearly seen in the song Expressing yourself. Billy and Michael are singing about the importance of people being able to express themselves in any way they want to which is a very serious topic. As they do massive puppets of different types of clothing are seen on stage.

A third technique we see used in Billy Elliot is Physical theatre. This is done by male characters within the performance as they are showing the message, Men don't dance.

Five Key Acting Skills

Facial Expressions - How can we show emotions through our faces?
Eye contact, eye brows, straight, emotions, gritting teeth, tense, relaxed, wrinkled, creased, staring, twitching.

Voice - How can we use our voice in performance? Tone, pitch, pace, emotion, volume, projection, dialogue, dialect, accent, intonation, whistling, SFX, interjection.

Posture - How can we use our bodies to help us create performance? Posture, blocking, positioning, front on, side on, emotions, age, open or closed.

Gestures - These are movements with meaning, how can we use them in performance? Hands, arms, speed, clicking, rubbing, waving, mannerisms.

Movement - How can movement be used to create performance? Speed, pace, acceleration, gait, mannerisms, special awareness, stage presence.

Key Terminology

Script - The written words and stage direction which are spoken and performed in a play. A script will be written by a writer and then given to a director to create a performance.

Director - This is the person who is in charge of the actors and performers. The director will tell the actors how they want them to perform and move in each scene. They will block the performance.

Blocking - When creating a performance you must first plan where all the actors are going to be standing and moving to on the stage. You must also plan what set and props are going to be used in your performance. This is called Blocking.

Stage Direction - Text in a script which tells you what you need to be doing while performing. Some scripts may have more stage directions than others. Some directors may also decide not to use all of the stage directions because they have their own ideas for what the performers should be doing.

Characterisation - Using a variety of skills, improvisation techniques and background information to become your character. These skills are your 5 key acting skills. It is important you fully understand the character you are performing. You MUST remember, you are no longer yourself when acting. You become someone else.

Performance Discipline - Maintaining extremely high and professional levels of focus and concentration throughout rehearsals and performance. This involves being on task at all times, not laughing or giggling when you are acting. It is crucial to stay focused when performing.

Ensemble - A group of performers all working together in a performance.

Freeze Frame - When a scene 'freezes' for a moment to allow the audience to really explore the moment. It is like pressing pause on live action.

Tableaux - A collection of still images which create a performance. It is like looking through a photo album.

Immersive theatre - Audience are included in the performance but don't know what is going to happen. Actors may talk to or ask the audience questions about what is happening in the performance.

Example Self-evaluation

STRENGTH During my performance, I wanted to show how my character was really angry with another character. To do this, I scrunched my eyebrows together and tilted my head slightly forward, using facial expression to show my annoyance. I also had a very big frown and narrowed whilst making a low pitched noise to display my frustration. This was successful because the audience could clearly see how angry my character was when seeing their friend after having an argument.

AREA FOR IMPROVEMENT During my performance, I wanted to show how my character was really happy to see someone. To do this, I slowly waved my hand and had a slight smile on my face whilst quietly saying 'Hello' in a soft tone. My intention was to show how I was happy but wanted to show it in a subtle way. However, the audience were confused by this and thought that my reaction was too small. If given the chance to perform this moment again, I would make my gestures much bigger, my movements quicker and my facial expressions much more exaggerated so that the audience can see my excitement much more clearly.

5 Key acting Skills

Facial Expressions - Eye contact, eye brows, straight, emotions, gritting teeth, tense, relaxed, wrinkled, creased, staring, twitching.

Voice - Tone, pitch, pace, emotion, volume, projection, dialogue, dialect, accent, intonation, whistling, SFX, interjection.

Body language - Posture, blocking, positioning, front on, side on, emotions, age, open or closed.

Gestures - Hands, arms, speed, clicking, rubbing, waving, mannerisms

Movement - Speed, pace, acceleration, gait, mannerisms, special awareness, stage presence.

Interpretation - Finding the meaning/action within a script

Stage directions - Guidelines/hints for actors within a script

Blocking - Where actors are positioned on stage

Proxemics - How close actors are on stage

Semiotics - Study of words and symbols

Characterisation - Skills used to create a character

Given circumstances - Stanislavski technique - looking at the script, what do we definitely know to be fact?

Status - The amount of power/dominance each character has over others?

Levels - How high or low your body is positioned?

Key Terms

Interpretation - Finding the meaning/action within a script

Stage directions - Guidelines/hints for actors within a script

Blocking - Where actors are positioned on stage

Proxemics - How close actors are on stage

Semiotics - Study of words and symbols

Characterisation - Skills used to create a character

Given circumstances - Stanislavski technique - looking at the script, what do we definitely know to be fact?

Status - The amount of power/dominance each character has over others

Levels - How high or low your body is positioned

Long term targets - What do you want to achieve by the end of this unit?

Short term targets - What do you want to achieve within the next few rehearsals?

Physical skills - Everything you can do with your face, hands, movement and body.

Vocal skills - Everything you can do with your voice—be specific with terms.

Interpretive skills - How well you interpret a script or a character. How do you become the character?

How to write a self evaluation

Example of Pass standard self-evaluation—DESCRIBE

(Say what you did)

At the moment, I am good at creating characters as I start acting as soon as I get a script. I use a variety of vocal skills including pace, accent and projection to create these characters. My movement skills need some work, for example - I think I need to focus on improving my gestures.

Example of Merit standard self-evaluation—DISCUSS

(Say what you did and why you did it)

At the moment, I am good at creating characters from scratch as I begin improvising and rehearsing as soon as I get a script. I use a variety of vocal skills including pace, accent and projection to create these characters, for example - when playing an older character recently, I spoke in an exaggerated tone and the raised the volume of my voice. My movement skills need some work, for example - I think I need to focus on improving my gestures as last time, I didn't use enough. My posture also needed work as my back was too straight.

Example of Distinction standard self-evaluation—EVALUATE

(Say what you did, why you did it and what the effect on the audience would be)

At the moment, I would say that my improvisation skills are good as I feel comfortable enough to create characters almost immediately after reading a script. I use a variety of vocal skills including pace, accent and projection to create these characters, for example - when playing an older character recently, I spoke in an exaggerated elderly tone to express an element of humour to an audience and raised the volume of my voice to have the effect of this older person not having good hearing and wanted people to speak up. I feel that my movement skills need improvements however, if I am to become a better actor. For example, I think I need to focus on improving my gestures as last time, they weren't expressive enough and it made my character less believable. Also, my posture needed to be more hunched over as my back was too straight and I think I could've moved in a more staggered manner to express to the audience how unstable this character was on their feet. All in all, I feel that I have a pretty good understanding of how to vocally convey characters but need some work on how to physically portray them.

Key elements Narration—Speaking directly to the audience, explaining what is happening on stage. Gobo—Silhouette lighting to represent something else. Gauze—A thin material than becomes transparent in light. Minimalistic—Simplistic and kept to a minimum. Pause—A moment of silence, often deliberate and prolonged Stylised—Requires an audience to use their imagination rather than appearing realistic. Meta-theatre—Play within a play, the audience is aware of the creation of drama within a piece. Fourth Wall—The imaginary wall separating the stage and auditorium which is often broke as the actors enter through the audience. Props - Items or objects used on stage Set - Arrangement of scenery and props to create a place on stage LFX - Lighting effect that you use in a performance to create atmosphere and tension. SFX - Sound effects that you use in a performance to create atmosphere and tension.	Types of Staging Proscenium Arch - most famous variety, raised stage with fixed arch above it, auditorium looking on. Traverse - like a catwalk, stage down middle and audience on either side. Thrust - stage thrusts out into the audience so that they are closer to the action. In the round - audience surrounds stage, action takes place in the middle. End on - stage is on level ground with auditorium and no arch above the stage. Black Box Studio - studio room kitted out with lighting and sound, adaptable staging types and open canvas. Auditorium - where the audience sit to watch the performance. Evaluating a rehearsal - DISTINCTION Example In today's rehearsal, my group worked really well and blocked a new part of our script which showed my character becoming aggressive with his wife. We first thought about the using mime during this part of the scene with a piece of tense music to effectively show the build up in tension. However, after trying this, we discovered two things; firstly, the dialogue was more effective if it flowed naturally and secondly, the music didn't suit our style of performance (naturalistic scenes do not feature mime). We decided that I needed to pause and give a wide-eyed stare at my wife with an angry facial expression, showing that I was becoming more tense and giving the audience a clear sense of foreboding. After a deep breath, I suddenly tried to shout at her to provoke a natural reaction. We felt that this worked really effectively because the audience would be on the edge of their seats and feeling tense. Overall, the rehearsal went really well and we agreed that this was a high point of drama that should definitely remain in our final performance.	Line learning methods Read the line, cover it up, read it out loud, check for accuracy. Break script up into sections, read one section over and over again. Read over your lines for short periods of time numerous times a day. Write them out on lined paper repeatedly. Record yourself (video or voice note) performing the lines and listen to it on repeat. Write out the first word of each line. When learning lines an actor must also consider how their character would say each of these lines. It is important that as an actor you do not forget that these lines are your characters and not your own. You must think about the emotion behind each line and why your character is saying it. It is also important that you understand how your character feels when saying each of their lines.	How to create tension in performance. Eye contact – Maintaining eye contact with the person you are in direct conflict with will increase the tension dramatically. It connects you to each other in a non physical way but still very personal. Pauses – Arguably the most important of the three. Moments of silence are essential when building tension as not only do they show that each character is carefully weighing up their next move but it allows the audience to take some time to absorb the situation and keep them guessing what is going to happen next. Volume and pace – speaking at a natural volume and pace lulls the audience into a false sense of security. By slowing decreasing both, the audience naturally begin to feel tension building. This can then be increased to a quicker pace and louder volume until the scene reaches a climax. Acting Style The semi naturalistic acting within the play contributes to the audience's belief in the characters and allows them engage more in the story. Multi-rolling is used exceptionally well to portray a variety of characters within the small town of Crythin Gifford. The minimalist set , minor props and miming are all used effectively to draw in the audience. Lighting and sound effects are used brilliantly to set the scenes, the use of long pauses/silence is a huge trait of horror theatre and the auditorium is dark and in need of refurbishment—all elements that are essential to ensuring that audiences receive the most horrifying performance possible.
---	--	---	--

Five Key Acting Skills

Facial Expressions - How can we show emotions through our faces? Eye contact, eye brows, straight, emotions, gritting teeth, tense, relaxed, wrinkled, creased, staring, twitching.

Voice - How can we use our voice in performance? Tone, pitch, pace, emotion, volume, projection, dialogue, dialect, accent, intonation, whistling, SFX, interjection.

Posture - How can we use our bodies to help us create performance? Posture, blocking, positioning, front on, side on, emotions, age, open or closed.

Gestures - These are movements with meaning, how can we use them in performance? Hands, arms, speed, clicking, rubbing, waving, mannerisms.

Movement - How can movement be used to create performance? Speed, pace, acceleration, gait, mannerisms, special awareness, stage presence.

Key Terminology

Script - The written words and stage direction which are spoken and performed in a play. A script will be written by a writer and then given to a director to create a performance.

Director - This is the person who is in charge of the actors and performers. The director will tell the actors how they want them to perform and move in each scene. They will block the performance.

Blocking - When creating a performance you must first plan where all the actors are going to be standing and moving to on the stage. You must also plan what set and props are going to be used in your performance. This is called Blocking.

Stage Direction - Text in a script which tells you what you need to be doing while performing. Some scripts may have more stage directions than others. Some directors may also decide not to use all of the stage directions because they have their own ideas for what the performers should be doing.

Characterisation - Using a variety of skills, improvisation techniques and background information to become your character. These skills are your 5 key acting skills. It is important you fully understand the character you are performing. You MUST remember, you are no longer yourself when acting. You become someone else.

Performance Discipline - Maintaining extremely high and professional levels of focus and concentration throughout rehearsals and performance. This involves being on task at all times, not laughing or giggling when you are acting. It is crucial to stay focused when performing.

Ensemble - A group of performers all working together in a performance.

Freeze Frame - When a scene 'freezes' for a moment to allow the audience to really explore the moment. It is like pressing pause on live action.

Tableaux - A collection of still images which create a performance. It is like looking through a photo album.

Immersive theatre - Audience are included in the performance but don't know what is going to happen. Actors may talk to or ask the audience questions about what is happening in the performance.

Example Self-evaluation

STRENGTH During my performance, I wanted to show how my character was really angry with another character. To do this, I scrunched my eyebrows together and tilted my head slightly forward, using facial expression to show my annoyance. I also had a very big frown and narrowed whilst making a low pitched noise to display my frustration. This was successful because the audience could clearly see how angry my character was when seeing their friend after having an argument.

AREA FOR IMPROVEMENT During my performance, I wanted to show how my character was really happy to see someone. To do this, I slowly waved my hand and had a slight smile on my face whilst quietly saying 'Hello' in a soft tone. My intention was to show how I was happy but wanted to show it in a subtle way. However, the audience were confused by this and thought that my reaction was too small. If given the chance to perform this moment again, I would make my gestures much bigger, my movements quicker and my facial expressions much more exaggerated so that the audience can see my excitement much more clearly.

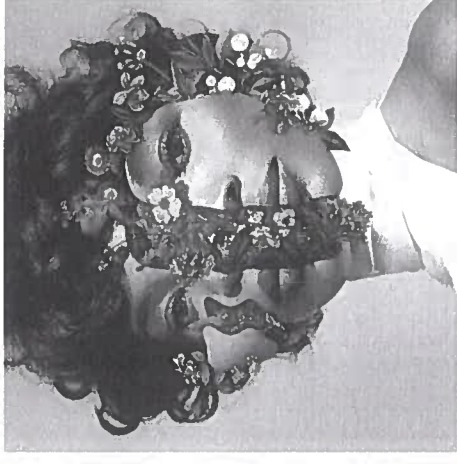
AO1- Assessment objective 1 – Develop ideas through investigations, demonstrating critical understanding of sources. Artist Research!! Evidence can include: Artist research, contextual research, analysis of artist artwork, thumbnail sketches showing composition. Grading criteria for level 9: Demonstrate independent critical investigation and in-depth understanding of sources to develop ideas convincingly.	AO2- Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes. Experimenting!! Evidence can include: Photoshoots, investigating different techniques, annotating of your contact sheet, post production editing. Grading criteria for level 9: Effectively apply a wide range of creative and technical skills, experimentation and innovation to develop and refine work	AO3-Record ideas, observations and insights relevant to intentions as work progresses. Annotations!! Evidence can include: Photoshoot plans, thumbnail sketches, storyboards, visual analysis of photography. Grading criteria for level 9: Record and use perceptive insights and observations with well-considered influences on ideas	AO4-Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language. Final Response!! Evidence can include: A personal and purposeful response to an artist/ context. response should be informed by the study of artists/ techniques. Grading criteria for level 9: Demonstrate advanced use of visual language, technique, media and contexts to realise personal ideas
<u>Photography techniques</u> <u>Colour schemes</u> Warm colours: E.g. red, orange and yellow Cool colours: E.g. Blue, grey and green Complementary colours: Colours opposite each other on the colour wheel Harmonious colours: Colours next to each other on the colour wheel Neutral/ earthy tones: E.g. browns, creams and beige Monochromatic: Only one colour with multiple tones <u>Affinity layers:</u> New layer-  Adjustment layer-  Screenshot– Windows + Shift + S 			
<u>Camera settings</u> A-DEP Automatic Depth of Field M Manual AV Aperture – Priority TV Shutter — Priority P Programmed Automatic  Scene Intelligent Auto  No Flash  			

24

Formal element	Meaning	Artwork example	Relevant artist/photographer
Pattern	There are patterns all around us if we only learn to see them. Emphasizing and highlighting these patterns can lead to striking shots – as can high lighting when patterns are broken.		JON MEASURES
Texture	Photographs of two dimensional objects yet with the clever use of 'texture' they can come alive and become almost three dimensional. You want the viewer to imagine how the object feels.		ANSEL ADAMS
Shape	The way subjects connect to each other in a photo forms shapes that draw the eye from subject to subject. If your subject is already triangular or diamond-shaped (like a pyramid), the viewer's eye will automatically focus on that shape.		MAN RAY
Rule of Thirds	A 3x3 grid used by photographs to create a composition that feels right. Objects that fall on or near the lines are considered to have the best impact.		ERNST HAAS
Abstract	It is taking a subject and forcing the viewer to look at it in a different way. This may cause the subject to lose its original meaning or purpose. It may even render the subject unreal, abnormal and not of this world. The subject could lose all literal meaning and be reduced to only shape, light, texture		PAUL STRAND

Marcelo Monreal

Monreal is a Brazilian collage artist. He is known for his thought-provoking take on inner beauty. He uses digital techniques to cut open portraits of celebrities, supermodels and other figures of pop culture to reveal beautiful blooms inside. He came up with this idea because he thinks that people don't often tell us who they really are, as they keep parts of themselves hidden.



Digital photo manipulation

Using Affinity Photo 2:

Scaling– Ctrl T and then you can scale, position and rotate your photo.



Selecting colours—The Eyedropper tool can sample colours from anywhere in an image and add them to your Swatches panel.



Fixing imperfections—Small changes- select spot healing tool.

Click on the imperfection you want to remove.

Bigger changes- Select clone stamp tool.



Use Alt to select what you want to use to cover the imperfect with (e.g. part of the background). Then use the clone stamp tool to paint over the imperfection.

Removing the background—Use quick selection tool .



Select what you want to keep.

To deselect parts hold Alt and click on them.

Once happy, copy and paste your selection. (Ctrl C, Ctrl V)

Then make the layer with the background invisible or delete it.



Year 10 GCSE Business: Knowledge Organiser - Theme 1.3 - Putting a Business Idea into Practice

1. Business Aims and Objectives

- **Aims** - General statements of what the business intends to achieve in the long term. *Example:* To be the leading eco-friendly coffee shop in the area.
- **Objectives** - Specific, measurable, achievable, realistic, and time-bound (**SMART**) targets to achieve the aims. *Example:* To achieve a £10,000 profit in the first year of trading.
- **Financial Objectives** - Targets expressed in money terms (e.g., Profit, Revenue, Market Share, Financial Security).
- **Non-Financial Objectives** - Targets not expressed in money terms (e.g., Personal Satisfaction, Independence, Challenge, Social/Ethical objectives).
- **Why they are important** - Guide decision-making, measure success, motivate employees, set clear targets.

2. Revenue, Costs, and Profit

- **Revenue (Sales Revenue)** - Income from selling goods or services. *Formula:* Selling Price per unit x Quantity Sold
- **Fixed Costs (FC)** - Costs that do not change with the level of output (e.g., Rent, Salaries, Insurance).
- **Variable Costs (VC)** - Costs that change directly with the level of output (e.g., Raw Materials, Piece-Rate Wages).
- **Total Costs (TC)** - All the costs of a business combined. *Formula:* Fixed Costs + Variable Costs
- **Profit** - Revenue remaining after all costs are deducted. *Formula:* Revenue - Total Costs
- **Loss** - When Total Costs are greater than Revenue.
- **Break-Even Point (BEP)** - The level of output where Total Revenue = Total Costs. The business makes neither a profit nor a loss. *Formula:* Fixed Costs / (Selling Price per unit - Variable Cost per unit)
- **Margin of Safety** - The amount by which actual sales exceed the break-even level. Shows how much sales can fall before a loss is made.

3. Cash and Cash Flow

- **Cash** - Notes, coins, and money in the bank. Essential for paying day-to-day debts.
- **Cash Flow** - Movement of cash into (Inflow) and out of (Outflow) a business over a period.
- **Inflows** - Sales revenue, loans, capital introduced.

- **Outflows** - Payments for costs, wages, rent, stock.
- **Net Cash Flow** - Total Cash Inflow - Total Cash Outflow.
- **Negative Cash Flow** - When outflows are greater than inflows (risk of not being able to pay debts).
- **Cash Flow Forecast** - A prediction of future cash flows to help manage shortfalls.
- **Closing Balance** - Cash at the end of the month. Formula: Opening Balance + Net Cash Flow.
- **Managing Cash Flow Problems** -
 - Increase Inflows: Speed up payment from debtors, take out a short-term loan/overdraft, sell off unused assets.
 - Decrease Outflows: Delay payments to creditors (trade credit), reduce stock levels, negotiate cheaper supplies.

4. Sources of Finance

Type	Source	Features/Suitability
Personal Savings	Internal	No interest/debt. Long-term use.
Retained Profit	Internal	Profit kept back for future use. No interest. Long-term use.
Selling Assets	Internal	Selling unused items for cash. Short-term/immediate use.
Loans	External	Borrowed money repaid over a set period with interest. Long-term.
Venture Capital	External	Investment from a specialist in exchange for a share of the business. Long-term.
Share Capital	External	Money raised from selling shares (Limited Companies only). Long-term.
Overdraft	External	Permission to spend more than in the bank account (up to a limit). High interest. Short-term.
Trade Credit	External	Buying goods/services now and paying later (e.g., 30-60 days). Interest-free if paid on time. Short-term.
Crowdfunding	External	Raising small amounts from many people, often online. Both short and long-term.

Theme 1.4 - Making the Business Effective

1. Business Structure and Ownership

- **Sole Trader** - Owned and controlled by one person. *Liability: Unlimited Liability* (Owner is personally responsible for all business debts).
- **Partnership** - Owned by 2-20 partners. Profits/losses are shared. *Liability: Unlimited Liability*.
- **Private Limited Company (Ltd)** - Owned by shareholders (usually family/friends). Shares cannot be sold to the public. *Liability: Limited Liability* (Risk limited to money invested). Incorporated business.
- **Limited Liability** - Personal assets of owners are protected from business debts (Applies to Ltd).
- **Unlimited Liability** - Owner's personal wealth can be used to pay off business debts (Applies to Sole Traders/Partnerships).

2. Location

- **Proximity to Customers** - Location must be easily accessible to the target market (e.g., town centre for retail).
- **Proximity to Suppliers** - Reduces transport costs and speeds up delivery times.
- **Proximity to Competitors** - Sometimes beneficial (cluster of similar shops) or detrimental (direct rivalry).
- **Nature of the Business** - Retail needs high footfall; e-commerce needs cheap warehouse space.
- **Cost** - Rent, business rates, and running costs must be affordable and justifiable by potential revenue.

3. The Marketing Mix (The 4 Ps)

- **Product** - What is being sold. Decisions on Function, Aesthetics, and Cost (The Design Mix). Focus on Branding and USP (Unique Selling Point).
 - *Adding Value*: Reliability, quality, attractive design, trusted brand name.
- **Price** - How much a customer pays. Influenced by costs, competitors, and the market.
 - *Strategies*: **Penetration** (low price to gain share), **Skimming** (high price for new, innovative product), **Competitive** (matching rivals' prices).
- **Promotion** - Methods used to inform customers and persuade them to buy.
 - *Methods*: Advertising (TV, social media), Sales Promotions (Discounts, BOGOF), Public Relations (free publicity).

- **Place** - How the product gets from the seller to the customer (distribution channels).
 - *Channels*: Direct to Consumer (own store/website), Retailer (supermarket), Wholesaler (sells to retailers), E-commerce (online selling).
-

4. Business Plans

- A written document describing a business, its objectives, strategies, and financial forecasts.
- **Sections:**
 - **Executive Summary** - Brief overview of the entire plan (engages investors).
 - **Business/Product** - Description of the product/service and its USP.
 - **Market** - Results of market research, target market, and competitor analysis.
 - **Personnel** - Details of the owner/management team's skills and experience.
 - **Financial Forecasts** - Revenue, costs, profit, break-even point, and cash flow forecasts (shows viability).
 - **Start-up Costs** - Money needed and sources of finance (reassures lenders).

Lever Systems

Know the three classes of lever and their use in physical activity and sport:

Bones and muscles act together to form levers. A lever is a rigid structure, a length of bone that turns about a pivot- the joint. Levers are used to make a small amount of force into a bigger force- this is gaining a **mechanical advantage**.

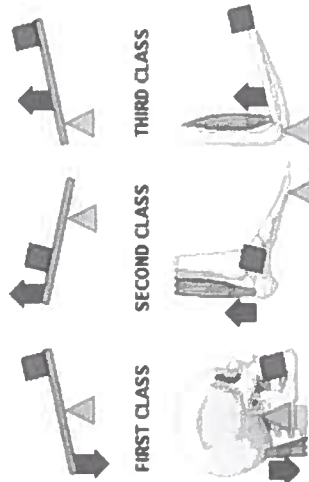
Four parts to a lever:

Lever arm- bones acts as lever arms

Pivot- Joints act as a pivot

Effort- muscles provide the effort to move loads

Load- load forces are often the weight of the body parts that are moved or forces needed to lift, push or pull things.



First class lever- the fulcrum (sometimes called pivot) is located between the effort force and the load force on the lever arm. *Example- at the neck- heading the ball.*

Second class lever- this is when the load or resistance is between the fulcrums and the effort. *Example- raising your toes or plantar flex at the ankle.*

Third class lever- this is when the effort is between the fulcrum and the load or resistance. *Example- at the knee the action of the hamstrings and the quadriceps at the knee joint causing flexion and extension, such as leaping up to catch a basketball.*

Know the definition of mechanical advantage- The relative efficiency of each of the lever systems is called the 'mechanical advantage'.

Some levers (first and second class) provide mechanical advantage. This means that they allow you to move a large output load with a smaller effort.

$$\text{MECHANICAL ADVANTAGE} = \frac{\text{LOAD}}{\text{EFFORT}}$$

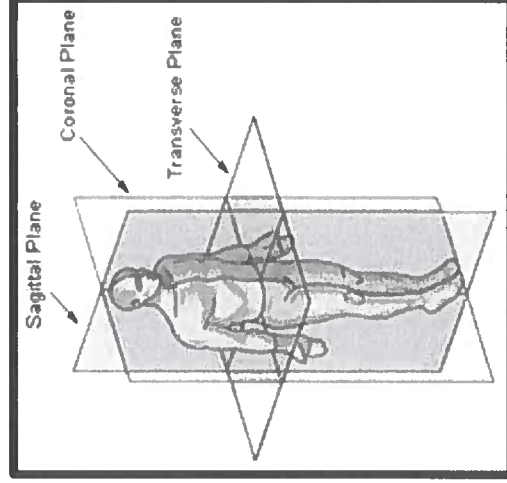
Where the load = 500N and the effort=100N

The mechanical advantage would be

500N divided by 100N = 5

Planes of movement and axes of rotation

Know the location of the planes of movement in the body and their application to physical activity and sport:

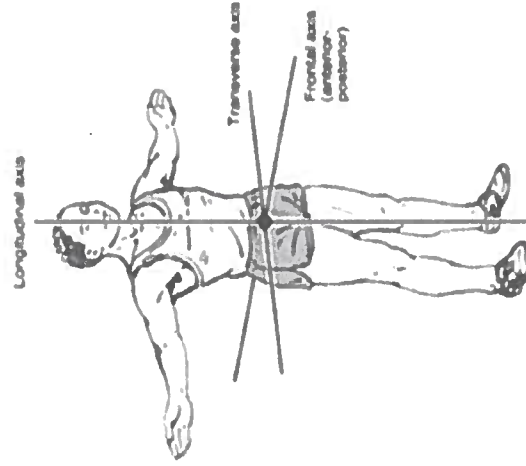


Frontal Plane- Runs vertically and divides the body in sections between front (anterior) and back (posterior). Movements in this plane are sideways movements of abduction and adduction. *Example- abduction and adduction of the legs at the hip joint- jumping jack.*

Transverse Plane- Runs horizontally and divides the body into upper (superior) and lower (inferior) sections. Movements in this plane are rotational. *Example- arm action (circumduction) when bowling in cricket with rotation at the shoulder joint.*

Sagittal Plane- Splits the body vertically into left and right sides. Movements in this plane are the up and down movements of flexion and extension. *Example- leg action in running takes place in the sagittal plane.*

Know the location of the axes of rotation in the body and their application to physical activity and sport:



There are 3 axes of rotation:

-Frontal axis

-Transverse axis

-Longitudinal axis

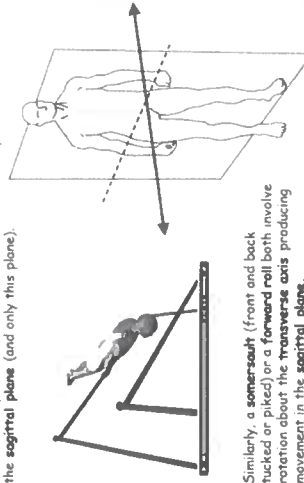
Rotation About The Frontal Axis

In this example (cartwheel) rotation about the **frontal axis** produces movement in the **frontal plane** (and only this plane).



Rotation About The Transverse Axis (1)

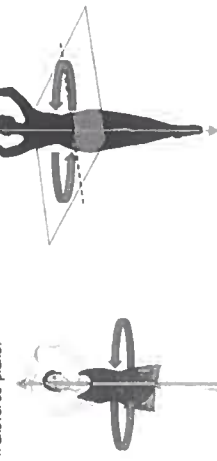
In this example rotation about the **transverse axis** produces movement in the **sagittal plane** (and only this plane).



Similarly, a **somersault** (front and back tucked or piked) or a **forward roll** both involve rotation about the **transverse axis** producing movement in the **sagittal plane**.

Rotation About The Longitudinal Axis (1)

In this example the ballet dancer rotates about the **longitudinal axis** producing movement in the **transverse plane**.



Similarly, an **ice skater** in a spin involves rotation about the **longitudinal axis** which produces movement in the **transverse plane**.

Components of Fitness-

Know the following components of fitness-

Cardiovascular Endurance/Stamina

-Definition- Cardiovascular endurance is the ability to continuously exercise without tiring.

-Practical examples where it is important
Running/aerobics/swimming/fast walking/cross country skiing

-Know Suitable Tests
Cooper 12 minute run/walk test, Multi-stage fitness test

-Know Suitable Tests
Cooper 12 minute run/walk test, Multi-stage fitness test

Muscular Endurance

-Definition- Muscular endurance is the ability of the muscle or muscle groups in the body to repeatedly contract or keep going with without rest.

-Practical examples where it is important
Cross-country running, long distance cycling, long distance swimming, rugby/football/hockey full games

-Know Suitable Tests
Press up test, sit up test.

Speed

-Definition- Speed is the ability to move all or part of the body quickly.

-Practical examples where it is important
Athletics e.g. 200m sprint

Swimming e.g. 50m freestyle

Squash- running to the front of the court to retrieve drop shot

-Know Suitable Tests
30m Sprint test

Strength

-Definition- Strength is the amount of force a muscle can exert against a resistance.

-Practical examples where it is important
Sprinting- strong arm action, rugby-driving forward in scrum, cycling, strong leg action

-Know Suitable Tests
Grip strength dynamometer test
1 Repetition Maximum (RM)

-Know Suitable Tests
Grip strength dynamometer test
1 Repetition Maximum (RM)

Power

-Definition- Power is the ability to perform strength based movements quickly

-Practical examples where it is important
Triple jump in Athletics, throwing in Athletics, tackling in rugby

-Know Suitable Tests
Standing broad jump
Standing vertical jump

Flexibility

-Definition- Flexibility is the amount or range of movement that you have around a joint.

-Practical examples where it is important
Gymnastics-achieve splits, dance- make a lunge in performance, hockey- stretch to make tackle, table tennis- perform smash

-Know Suitable Tests
Sit and reach test

-Know Suitable Tests
Sit and reach test

Agility

-Definition- Agility is how quickly you can change direction under control and maintaining speed, balance and power.

-Practical examples where it is important
Trampolining and gymnastics- perform a sequence, netball- pass when leaping in air, volleyball- jump quickly to block

-Know Suitable Tests
Illinois agility test

Balance

-Definition- Balance is the ability to maintain equilibrium, whether stationary or moving.

-Practical examples where it is important
Gymnastics- to perform a somersault on beam, hockey- maintain balance when taking penalty flick, dance- hold arabesque position.

-Know Suitable Tests
Stork stand test

Co-ordination

-Definition- Co-ordination is the ability to move different limbs at different times or do more than one task effectively at the same time.

-Practical examples where it is important
Dance, tennis and other racket sports, gymnastics, team games like football/netball.

-Know Suitable Tests
'Wall throw test'.

-Know Suitable Tests
'Wall throw test'.

Reaction Time

-Definition- Reaction Time is the time is take for you to initiate an action or movement in response to a stimuli.

-Practical examples where it is important
Sprint start in athletics, receiving a serve in tennis, football- goalkeeper saving a penalty.

-Know Suitable Tests
Reaction time ruler test

Principles of Training-

Know the following definitions of principles of training and be able to apply them to personal exercise/training programmes:

Specificity- The training must be matched to the needs of the sporting activity and individual.

Example – A sprinter would carry out more anaerobic training because the event is mostly anaerobic in nature.

Overload- The body must work harder than normal so there is some stress and discomfort.

Adaptation and progress will follow Overload because the body will respond to the stress.

Example – in weight training the lifter will eventually attempt heavier weights or increase reps in order to create Overload.

Progression- Not only do we need to include Overload in our training, it must also become gradually more difficult. Example a Weight Lifter will be able to increase the weight they can lift over time as they increase their intensity, duration and frequency of training.

Reversibility- Any adaptation that takes place as a result of training will be lost if you stop training.

Example - a track athlete's VO₂max and Strength will decrease if they injure themselves and are unable to train for a period in time.

Optimising Training-

Know the definition of the elements of FITT and be able to apply these elements to personal exercise/training programmes.

Frequency: The Number of Training Sessions Each Week

Example: an elite athlete may train every day whereas a lower level club player may train once a week.

Intensity: How Hard you Train

Example: a Sprinter might work really hard using HIIT training for a short period of time whereas a long distance athlete will work at a lower intensity but over a longer period.

Time: How Long you Train for

Type: Which method of Training you use.

Know different types of training, definitions and examples of:

Continuous training- A method of training that seeks to maintain or improve Cardiovascular Endurance.

Example- long distance running, cycling or swimming

Fartlek training- Also known as 'SPEED PLAY' (Swedish) often used to maintain or improve aerobic endurance Example-deal for team sports as it replicates the efforts of a player / athlete in a game like situation (run, walk, jog, sprint, rest, repeat).

Interval training- A type of training which features distinct periods of work followed by periods of rest.

Example- ideal for team sports- sprint 30m, rest, repeat 5 times.

Circuit Training (Interval Training)- A

method of training that incorporates different stations to stress / overload different muscle groups.

Example- Skipping – Press Ups – Squats – Dips – Crunches – Rest – Repeat

Weight Training (Interval Training)- A form of training that involves the use of resistance to overload muscle groups and force adaptations that grow muscle tissue.

Plyometrics (Interval Training)- A form of training that involves rapid and repeated stretching and contracting of muscles designed to increase strength and power.

Example- Any sport that involves sprinting, throwing and jumping will benefit from this type of training such as Basketball, netball or rugby.

High Intensity Interval Training (HIIT)- A

Cardiorespiratory training technique that alternates brief speed and recovery intervals to increase the overall intensity of a work out.

Understand the key components of a warm up and be able to apply examples-

Component 1: **Pulse Raising** exercises - to slowly raise heart rate and gradually increase body temperature e.g. jogging / cycling

Component 2: **Mobility** exercises that take joints through their full range of movement e.g. high knees / arm swings

Component 3: **Stretching** can include static or dynamic type stretches e.g. lunges, walking hamstring stretch.

Component 4: **Dynamic Movements** that show a change in speed and direction e.g. shuttle runs

Component 5: **Skill Rehearsal** or practising the common movement patterns and skills that will be used in the activity e.g. dribbling drills for football, shooting in basketball.

Know the physical benefits of a warm up-
-Warms up the muscles & prepares the body for physical activity

-Increases Heart Rate (release of adrenaline)
-Increases blood flow and oxygen to working muscles

-Decreases the *likelihood* of injury and muscle soreness (DOES NOT **PREVENT** INJURY)

-Increase in Body Temperature (increased energy production)

-Increases Flexibility of muscles and joints

-Increases Pliability of ligaments and tendons

-Increases speed of muscle contraction

Understand the key components of a cool down and be able to apply examples-

Component 1: **Low Intensity Exercises.**
Aimed to gradually lower Heart Rate and reduce the body's core temperature.

Examples - light jogging

Component 2: **Stretching.** Includes steady and static stretches which are held for longer than in the Warm Up, example 15 seconds.

Examples - hamstring stretch & triceps stretch

Know the physical benefits of a cool down-

The Cool Down is essential to an effective training session. Cool downs allow Oxygen to flush through muscle tissue and get rid of Lactic Acid.

The Cool Down is crucial in...

-Helping the body's transition back to resting state

-**Gradually** lowering heart rate

-**Gradually** lowering temperature

-Circulating blood and oxygen

-**Gradually** reducing breathing (respiratory) rate

-Increasing the removal of waste products such as lactic acid

-Reducing the risk of muscle soreness and stiffness

-Reducing the risk of damage to joints

-Aiding recovery by stretching muscles

Prevention of injury

Understand how the risk of an injury in physical activity and sport can be minimised and be able to apply examples-

Personal Protective Equipment-

Risks arising from some hazards can be limited by using Personal Protective Equipment. Many sports advise using protective equipment others require it's use in through legislation.

Example- shin pads in football, gum shield in Rugby.

Correct clothing/footwear-

Wearing the correct clothing and footwear for a sport/activity is very important. Clothing can protect from the weather (sun, heat, cold, rain, ice). Some activities/sports may have rules preventing the wearing of certain clothes that could be dangerous to self or others.

Example- ski salopettes.

Correct footwear is one of the most important and common safety features. Footwear can help give you stability on the various surfaces you perform on. Footwear can protect your feet. Footwear might also support the ankle joints etc.

Example- Football boots, ski boots

Appropriate level of competition-

Fitness Level:

- Ensure you are fit to take part in your chosen activity
- Ensure you have an appropriate skill level before taking part in your chosen activity

Weight Categories:

- E.g. Boxing / Martial Arts competitors are matched according to weight as well as ability.
- E.G Boxing: a 7ft 20 stone pro boxer can not safely take on a 5ft 8 stone opponent.

Mixed or Single Sex:

-In most sports men play with and against men and women against women (football / rugby – contact sports!)

-Based on fair competition as men naturally have more muscle than women, this can also be seen as a safety consideration.

Age:

-Children's competitions are based on age as children differ greatly in body size and physical development with each year.

Lifting and carrying equipment safely-

Serious injuries can be caused before the activity even starts by carrying heavy or awkward sporting equipment incorrectly. Bend at the knees NOT the back!

Use of warm up and cool down-

Warming up gradually prepares the body for physical activity and cooling down disperses lactic acid and returns the body to a resting state preventing soreness and aches.

5 Methods of Reducing Risk in Sport

1. Personal protective equipment
2. Correct clothing/footwear
3. Appropriate level of competition
4. Lifting and carrying equipment safely
5. Warm up and cool down

Acronym
P - POTTED
C - CRABS
A - ARE
L - LOVELY
W - WARM

Know potential hazards in a range of physical activity and sport settings and be able to apply examples.

Sports Hall-

- Doors opening inwards
- Slippery floor – too polished
- Hard floor
- Apparatus stored at the sides
- Equipment left out/ not stored correctly
- Wooden floor – splinters
- Windows allow glare from sun
- Other participants

Fitness Centre-

- Broken equipment
- Open windows
- Free weights- trip/incorrect use
- Hard floor
- Other participants

Playing field-

- Litter- broken bottle/dog excrement
- Goal posts
- Poorly maintained fencing
- Uneven pitch surface (mole hills)
- Other participants

Artificial Outdoor Areas-

- Slippery surface of pitch
- Litter- broken bottle/dog excrement
- Poorly maintained fencing
- Other participants

Swimming Pool-

- Water
- Chemicals in the water
- Hard and slippery surface of surrounding area
- Other participants

GCSE Comp Sci Unit 1 - System architecture, memory and storage

The Central Processing Unit (CPU) - The CPU is the "brain" of the computer, responsible for executing instructions and processing data.

Term	Description
CPU (Central Processing Unit)	The main component that carries out the instructions of a computer program.
Von Neumann Architecture	A design model where the CPU fetches instructions and data from a single, shared memory and uses a single bus. Both instructions and data are stored in the same format. This is the basis for most modern general-purpose computers.
Embedded System	A computer system with a dedicated function within a larger mechanical or electrical system (e.g., in a washing machine, car engine management, or smart TV remote).

Key Components and the Fetch-Decode-Execute Cycle

The CPU uses the **Fetch-Decode-Execute** cycle (also known as the instruction cycle) to run programs.

Registers (Temporary Storage within the CPU)

Register	Description
PC (Program Counter)	Holds the address in memory of the next instruction to be executed.
MAR (Memory Address Register)	Holds the address of the memory location currently being read from or written to.
MDR (Memory Data Register)	Temporarily holds the data or instruction that has been fetched from or is waiting to be written to RAM.
Accumulator	Stores the results of calculations performed by the Arithmetic Logic Unit (ALU).

Functional Components	
ALU (Arithmetic Logic Unit)	Performs arithmetic calculations (addition, subtraction, etc.) and logical operations (AND, OR, NOT)
CU (Control Unit)	Manages and coordinates all the activities within the CPU. It controls the flow of data inside and outside the CPU and executes the F-D-E cycle.
Cache	A small, fast memory within the CPU chip used to store frequently accessed instructions and data to speed up processing.

The Cycle	
Fetch	The address of the next instruction is copied from the PC to the MAR. The instruction at that memory address is copied into the MDR and then placed in a register. The PC is incremented (ready for the next cycle).
Decode	The Control Unit interprets the instruction and prepares the components of the CPU for the next operation.
Execute	The ALU or CU performs the required operation (e.g., calculation, data movement, jump to a new address).

Factors Affecting CPU Performance	
Factor	Impact on Performance
Clock Speed	Measures how many cycles the CPU performs per second (GHz). A higher clock speed generally means faster execution of instructions.
Number of Cores	A core is an independent processing unit. More cores allow a CPU to execute more instructions simultaneously, improving performance when multitasking or running multi-threaded applications.
Cache Size	A larger cache means more instructions and data can be stored closer to the CPU, reducing the need to access slower RAM, which speeds up processing.

Units of data					
Unit	Size	Unit	Size	Unit	Size
Nibble	4 bits	Megabyte (MB)	10^6 bytes	Terabyte (TB)	10^{12} bytes
Byte	8 bits	Gigabyte (GB)	10^9 bytes	Petabyte (PB)	10^{15} bytes
Kilobyte (KB)	10^3 bytes (1000 bytes)				

Primary Memory - Primary memory is directly accessible by the CPU and is essential for running the computer system.		
Type	Volatility	Description
RAM (Random Access Memory)	Volatile	Read/Write memory used for the operating system, programs, and data currently in use. Its contents are lost when the power is turned off.
ROM (Read Only Memory)	Non-Volatile	Read-only memory that permanently stores the boot-up instructions (BIOS/UEFI) the computer needs to start. Its contents persist without power.
Virtual Memory	Volatile	When RAM is full, the OS moves data to a dedicated space on the secondary storage (e.g., hard drive). This is slower than RAM but allows more programs to run concurrently.

Secondary Storage - Secondary storage is non-volatile and used to store programs and data long-term when the power is off.			
Type	Media	Characteristics	Use Cases
Magnetic	Hard Disk Drive (HDD), Magnetic Tape	High capacity, relatively cheap, slow access speed (mechanical parts), vulnerable to physical damage.	General purpose computer storage, archiving large amounts of data.
Solid State	Solid State Drive (SSD), USB Stick, SD Card	Non-volatile, fast access speed (no mechanical parts), durable (shock-resistant), limited write cycles (wear out eventually), more expensive than HDDs per GB.	High-performance computing, mobile devices, portable storage.
Optical	CD-R/RW, DVD-R/RW, Blu-ray	Low capacity, very cheap, slow R/W speeds, highly portable, susceptible to scratches.	Distributing software/media, backing up small amounts of data.

Characteristics of Storage - When comparing storage media, the following factors are key:	
Factor	Description
Capacity	How much data can be stored (measured in GB, TB, etc.).
Speed	How quickly data can be accessed (read/write speeds).
Portability	Ease of physically moving the storage medium.
Durability	Resistance to physical damage (shock, heat, etc.).
Reliability	Likelihood of the data being lost or corrupted over time.
Cost	Price per GB of storage.

GCSE Computer Science Unit 3 Networks			
1. What is a Network? A network is two or more computers connected together to share data and resources. Advantages: Share files and hardware (e.g. printers) Communicate via email or messaging Centralised backups and security Easier software updates Disadvantages: Viruses and hacking can spread easily Expensive to set up and maintain Requires management and technical support		2. Types of Networks	
	Type	Description	Example
	LAN (Local Area Network)	Covers a small area (e.g. one building). Owned by one organisation.	School, office
	WAN (Wide Area Network)	Covers a large area; connects multiple LANs. Often uses third-party infrastructure (like the internet).	The Internet
	PAN (Personal Area Network)	Connects devices close to one user.	Bluetooth headphones
	VPN (Virtual Private Network)	Creates a secure 'tunnel' over a public network.	Remote working

3. Network Topologies		
Topology	Description	Pros
Star	All devices connect to a central switch/server.	Fast, reliable, easy to add/remove devices.
Bus	All devices share a single cable.	Cheap, easy to install.
Mesh	Every device connects to many others.	Very reliable; no single point of failure.
		Cons
		Expensive cabling; if switch fails, network fails.
		Collisions slow the network; single cable failure breaks the network.
		Expensive and complex.

4. Network Hardware	
Device	Function
Router	Connects different networks together (e.g. home network to the Internet).
Switch	Connects devices on a LAN and sends data only to the intended recipient.
Hub	Sends data to all devices – less efficient than a switch.
NIC (Network interface card)	Allows a computer to connect to a network.
WAP (Wireless access point)	Connects wireless devices to a wired network.
Modem	Converts digital data to analogue (and back) for transmission over telephone lines.

5. Transmission media		
Medium	Description	Pros
Copper cable (Ethernet)	Uses electrical signals.	Cheap, easy to install.
Fibre optic cable	Uses light signals.	Very fast, long range.
Wireless (Wi-Fi)	Uses radio waves.	Convenient, mobile.
		Interference, less secure.

6. Data transmission	
Packets: Data is split into small pieces for transmission. Each packet includes:	
Header:	Source and destination address, sequence number.
	Parity bit

Payload:	Actual data.	Checksum
Checksum:	Error checking.	ARQ (Automatic Repeat Request)

7. Network protocols		
Protocol		Purpose
TCP (Transmission Control Protocol)		Ensures reliable, ordered delivery of packets.
IP (Internet Protocol)		Routes packets across networks.
HTTP / HTTPS		Access web pages (secure version encrypts data).
FTP (File Transfer Protocol)		Transfer files between computers.
SMTP (Simple Mail Transfer Protocol)		Sends emails.
IMAP / POP3		Receives emails (IMAP keeps messages on server; POP3 downloads them).
DNS (Domain Name System)		Converts domain names (e.g. google.com) into IP addresses.

8. Network models	
Model	Description
Client-Server	Central server provides services to clients (e.g. file storage, authentication).
Peer-to-Peer (P2P)	Devices share resources directly without a central server.

Knowledge Organiser - Year 10, Spring Term - Buddhist Beliefs - GCSE Full Course RE - Paper 1

The Life of the Buddha:

- **Siddhartha Gautama** - The founder of Buddhism, later known as the Buddha
- **Buddha** - Means 'enlightened one' or 'awakened one.'
- **Enlightenment** - The gaining of true knowledge about the nature of reality; freedom from the cycle of rebirth
- **Ascetic** - A person who lives a simple, strict life of self-denial for spiritual reasons.
- **Middle Way** - The Buddha's teaching that avoids the extremes of luxury and asceticism.
- **Four Sights** - Old age, sickness, death, and a holy man — what inspired Siddhartha to seek enlightenment.
- **Mara** - The demon who tried to tempt Siddhartha during his meditation before enlightenment.
- **Dukkha** - Suffering or unsatisfactoriness — a central concept in Buddhism.

The Three Marks of Existence :

- **Anicca** - Impermanence — the idea that all things are constantly changing.
- **Anatta** - the belief that humans do not have a fixed or permanent soul.
- **Dukkha** - Suffering — life is unsatisfactory because it always involves change and loss.
- **Viparinama-dukkha** - Suffering caused by change.
- **Sankhara-dukkha** - Suffering caused by attachment and craving.
- **Dukkha-dukkha** - Ordinary physical and emotional pain.

The Three Jewels/ Refuges :

- **Three Jewels** - The three sources of guidance for Buddhists
- **The Buddha** - The teacher/ enlightened one
- **The Dhamma** - The teachings of the Buddha after his enlightenment
- **The Sangha** - The Buddhist Community

The Four Noble Truths

- **The Four Noble Truths** - The Buddha's main teaching explaining the cause of suffering and how to end it.
- 1. **Dukkha** - Life involves suffering.
- 2. **Samudaya** - The cause of suffering is craving (tanha).
- 3. **Nirodha** - Suffering can end if craving and attachment stop.
- 4. **Magga** - The way to end suffering is by following the Eightfold Path.
- **Tanha** - Craving or desire; wanting things leads to suffering.
- **Nirvana** - A state of perfect peace and liberation from the cycle of rebirth (samsara). (After enlightenment)

The Eightfold Path:

- **The Eightfold Path (Magga)** - The practical path to end suffering and reach enlightenment. It includes:
 1. Right View
 2. Right intention
 3. Right Speech
 4. Right Action
 5. Right Livelihood
 6. Right Effort
 7. Right Mindfulness
 8. Right Concentration

Samsara:

- **Samsara** - The cycle of birth, death, and rebirth.
- **Karma** - The law of cause and effect — actions have consequences.
- **Rebirth** - The continuation of a being's consciousness into a new form after death.
- **Nirvana (Nibbana)** - The end of suffering and rebirth; ultimate goal of Buddhism.
- **Dependent Arising (Paticcasamuppada)** - Everything exists because of other things; all things are interconnected.

The Five Aggregates/ Skandhas:

- **Aggregates/Skandhas** - The five things that make up all people:
 1. Form (Rupa) - Your body
 2. Sensations (Vedana) - Your senses e.g. taste
 3. Perception (samjna) - Your understanding of different objects/things
 4. Mental Formations (Samskara) - Your opinions and thoughts
 5. Consciousness (Vijnana) - Your general awareness of yourself as an individual in the world

Religious texts in Buddhism:

- **Dhamma (Dharma)** - The Buddha's teachings after his enlightenment
- **Jataka Tales** - Stories and moral lessons from Buddha's previous life and life before enlightenment
- **Tipitaka (Pali Canon)** - The earliest Buddhist scriptures which rules and teachings for Monks and Nuns.
- **Mahayana Sutras** - Teachings on compassion, emptiness and enlightenment.

Types of Buddhism:

- **Theravada Buddhism** - 'The way of the elders.' - Traditional form commonly found in Sri Lanka and Southeast Asia. Focuses on the Pali Canon.
- **Mahayana Buddhism** - 'The Great Vehicle' - includes Zen and Pure Land; found in China, Japan and Tibet.
- **Bodhisattva** - Someone who has found enlightenment and then stays to help others achieve the same. Aim for all Buddhist's in Mahayana Buddhism
- **Arhat** - Someone who has achieved enlightenment and broke free from the wheel of Samsara
- **Sunyata** - Emptiness. The belief that nothing has an independent permanent existence
- **Pure Land Buddhism** - Form of Mahayana Buddhism that focuses on the Amitabha Buddha and being reborn in the Pure Land
- **Amitabha Buddha** - The Buddha of infinite light; central figure in Pure Land Buddhism

Key Concepts:

- **Metta** - Loving Kindness; showing goodwill to all beings
- **Karuna** - Compassion; feeling concern for the suffering of others
- **Mindfulness** - Awareness of your thoughts, feelings and actions in the present moment.
- **Tanha** - Craving
- **Dana** - Generosity or giving

Knowledge Organiser - Year 10, Spring Term - Buddhist Practices - GCSE Full Course RE - Paper 1

Worship (Puja):

- **Puja** – The act of worship or showing reverence to the Buddha, Dhamma, or Sangha through meditation, offerings, or chanting.
- **Shrine** – A sacred space with an image of the Buddha or Bodhisattva used for meditation and puja.
- **Offerings** – Gifts of flowers, candles, or incense placed at a shrine to show respect and remind Buddhists of impermanence.
- **Bow (Prostration)** – Physical act of respect and humility before the Buddha or the Sangha.
- **Chanting** – Reciting verses or teachings to increase concentration and express devotion.
- **Mantra** – A short sequence of sacred syllables or phrases repeated during meditation.
- **Veneration** – Deep respect shown to the Buddha or Bodhisattvas, not worship of a god.
- **Mala Beads** - Prayer beads used to count mantra repetitions during meditation

Meditation (Bhavana):

- **Meditation (Bhavana)** – Mental training to develop concentration, calm, and insight into reality.
- **Samatha** – 'Calming' meditation — developing concentration by focusing on breathing or an object.
- **Vipassana** – 'Insight' meditation — understanding reality, including impermanence and no-self.
- **Zazen** – Seated meditation in Zen Buddhism focusing on mindfulness and awareness.
- **Mindfulness (Sati)** – Awareness of thoughts, feelings, and surroundings; central to daily life.

Places of Worship:

- **Temple (Vihara)** – A Buddhist place of worship and learning for puja and meditation.
- **Monastery** – A community where monks or nuns live under vows and practice Buddhism.
- **Stupa** – A dome-shaped structure containing relics; symbol of the Buddha's mind and enlightenment.
- **Bodhi Tree** – Tree under which Siddhartha achieved enlightenment — symbol of wisdom.

Festivals and Celebrations :

- **Wesak (Vesak)** – Festival celebrating the Buddha's birth, enlightenment, and death.
- **Parinirvana Day** – Marks the Buddha's death and entry into final Nirvana.

Ethical Practices :

- **Karuna** – Compassion — feeling concern for others' suffering and wishing to relieve it.
- **Metta** – Loving-kindness — unconditional goodwill towards all beings.
- **Ahimsa** – Non-harming — a key Buddhist ethical principle.
- **Skillful Action/Karma (Kusala)** – Actions rooted in wisdom and compassion, leading to good karma.
- **Unskillful Action/ Karma (Akusala)** – Actions based on greed, hatred, or ignorance, leading to suffering.

The Five Moral Precepts:

- **The 5 Moral Precepts:** Rules in Buddhism that all Buddhist's should stick to in order to ensure they reduce suffering.
 1. Abstain from harming sentient beings
 2. Abstain from taking that which is not freely given
 3. Abstain from sexual misconduct
 4. Abstain from speaking falsehoods
 5. Abstain from intoxicants which cloud the mind

The Six Perfections:

- **Six things all Buddhist Monks strive to have/ do:**
 1. Generosity
 2. Morality
 3. Patience
 4. Energy
 5. Meditation
 6. Wisdom

Symbols/Objects:

- **Lotus Flower** – Symbol of purity and enlightenment — grows from muddy water.
- **Wheel of Life (Bhavachakra)** – Diagram showing the cycle of birth, death, and rebirth (samsara).

BTEC Music - Year 10 - Component 1: Exploring Musical Products & Styles

Key Terminology

Melody - a sequence of single notes that is musically satisfying; a tune.

Harmony - the combination of simultaneously sounded musical notes to produce a pleasing effect.

Tonality - the character of a piece of music as determined by the key in which it is played.

Rhythm - a strong, regular repeated pattern of movement or sound.

Structure - refers to the arrangement and order of the parts or sections of the music.

Instrumentation - the particular instruments used in a piece of music.

Texture - refers to the effect of the different layers of sound in a piece of music, and the relationship between them.

Timbre - the character or quality of a musical sound.

Production - the process by which music is created, captured, manipulated, and preserved so that it can be distributed and enjoyed.

Musical Styles - Popular

Reggae - a style of popular music which uses syncopation (off-beat rhythms), originating in Jamaica. Reggae became widely known in the 1970s through the work of Bob Marley; its lyrics are much influenced by Rastafarian ideas. Reggae songs were largely based on increasingly politicised lyrics that addressed social and economic injustice - This is due to the Rastafarianism influence which advocated for equal rights and justice. Besides Marley and the Wailers, groups who popularised the fusion of Rastafari and reggae were Big Youth, Black Uhuru, Burning Spear (principally Winston Rodney), and Culture.

Britpop - British pop music of the mid 1990s that was typically influenced by the Beatles and other British groups of the 1960s and perceived as a reaction against American grunge music. Various bands were involved in Britpop such as, Pulp, from Sheffield, which was fronted by veteran rocker Jarvis Cocker and had its biggest hit with the single "Common People", but it was essentially about Oasis and Blur. What the two bands had in common was a belief in the classic guitar-based pop song with a sing-along chorus and a love of fashionable sportswear.

E!TEC Music - Year 10 - Musical Products & Styles

Musical Styles - World Music/Jazz & Blues

Delta Blues - a style of blues originating in the Mississippi Delta, typically featuring slide guitar. The form is dominated by fiery slide guitar and passionate vocalising, with the deepest of feelings being applied directly to the music. Its lyrics are passionate as well, and in some instances remain the highest flowering of blues songwriting as stark poetry. The form continues to the present time with new performers working in the older solo artist traditions and style. In its earliest form, the style became the first black guitar-dominated music to make it onto phonograph records back in the late 1920s.

Samba Music - The initial birth of samba music took place sometime in the early 19th century, with its roots stemming from African drumming traditions. Enslaved African people brought over to Brazil retained the influence of their own musical elements such as polyrhythms and syncopated patterns. It's now an integral part of Rio De Janeiro's famous yearly Carnival festival, at which many samba schools compete against one another.

Examples of Stylistic Features

Instrumentation: instrumental techniques, type of ensemble, alternative instrumentation, sonic features, electronic sounds.

Texture: solo, duet, homophonic, polyphonic, unison.

Timbre: sonic features, electronic sounds, FX.

Tonality: major scale, minor scales, blues scale, pentatonic scale, modes, ragas, exotic scales.

Scales and modes: major scale, minor scales, blues scale, pentatonic scale, modes, ragas, exotic scales.

Harmony: major and minor triads, power chords, 7th chords, sus chords, extended chords, suspensions, inversions, chord sequences, arpeggios, broken chords.

Rhythmic techniques: metre, tempo/bpm, syncopation, swing, one drop/skanking, polyrhythms, hemiola, phrasing.

Structure: verse/ chorus, 12-bar blues, through-composed, bridge, intro, outro, ABACAD.

Melodic techniques: conjunct, disjunct, chromatic, diatonic, phrasing, repetition, sequence, ornamentation, motifs, round/canon, riffs, hooks, lead, improvisation.

Production: microphone use, recording styles, sampling, FX, looping, controllerism, turntablism, quantisation, sequencing, automation.