Year 10 Option Subjects

Knowledge Organiser

May- July 2025

AMBITION, CONFIDENCE, CREATIVITY,
RESPECT, DETERMINATION

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FIVE ACRES HIGH SCHOOL

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.

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History around us GCSE Site study OCRb - Chepstow Castle Knowledge Organiser

1. 1 Timeline of key developments

1067 – 1090: The first Great Hall of Chepstow Castle is built.
1067: Earl William Fitz Osbern begins the construction of Chepstow Castle in the Marches between England and Wales.
1072: The tower keep of Chepstow Castle is built.
1190: Sir William Marshal begins rebuilding Chepstow Castle. He has married Isabella De Clare
July 1217: Henry III of England visits Chepstow Castle. It has a tower, new walls, arrow slits and an improved defensive entrance.
1244: Anselm Marshall adds new parts to the castle in a rich red sandstone – quarried locally (cheaper than the yellow limestone used by his father. Old hall keep turned into a tower. Larger windows installed
1272: Roger Bigod, 5th Earl of Norfolk, builds the western gatehouse at Chepstow Castle.
1285: A new Great Hall is completed at Chepstow Castle.
Dec 1285: Edward I of England visits Chepstow Castle.
1287 – 1293: The Marten's Tower is added to Chepstow
1300- Roger Bigod III: Builds more comfortable living areas in the castle. Strengthen the upper gatehouse in the barbican with a gate and portcullis. Built a wall around all of Chepstow. Roger needed to make sure the Welsh would not revolt and attack. He placed catapults on all four towers during the Welsh uprisings. Built a fine hall and kitchen, a cellar and grand apartments. Castle has separate buildings for the baron and top men in the household. Lodging areas for quests and servant quarters.
1306: Roger Bigod III dies and the castle passes to King Edward I. The castle no longer has any military significance.
1642 English Civil War: In the 17th C firearms became more common in warfare, Chepstow's battlements were modified to allow the use of cannons. For the same reason, circular windows were made in some of the walls which were thickened on the eastern side to withstand the firepower of would-be attackers. Chepstow was indeed finally attacked and breached during the English Civil War of the 1640s when the castle's commander, Sir Nicholas Kemeys, was killed.
Modern times: Today, Chepstow Castle is open to the public and managed by Cadw as a tourist attraction/historical site.

1.2 The site of the castle: Chepstow is a Norman castle perched high above the banks of the river Wye in southeast Wales. Construction began at Chepstow in 1067, less than a year after William the Conqueror was crowned King of England. Earl William Fitz Osbern was chosen to build the castle as he was a loyal supporter of William. The site of the castle is in the Marches, the area of land between England and Wales.

Point	Physical feature	Explanation
Built on River Wye	River Wye -control River Wye -defensive feature	To allow William Conqueror to control the area of the River between England and Wales. For added defence as River used for bringing in food during sieges
Topography	26 metre Limestone cliff - strategic	Used as a lookout-height. Hard to attack, cliff edge gives added protection
Marches	Location of castle	Built between England and Wales by supporters of William the Conqueror to secure lands and allow easy attack of Wales
Defensive	Gatehouse/portcullis	Barbican built to protect the gatehouse
Defensive	Round Tower	Strong towers were added to curtain walls to watch out for enemies. Hard to undermine
Defensive /Protection	Thick walls	From 1200 a curtain wall which is high and thick stop enemies getting access to the bailey
Storage	Cellar	On Wye side so boats could bring in food. Vast area to store food and drink
Living/society	Kitchen	Preparation of food area. Near Wye for waste
Protection	Battlements	The parapet of a wall consisting of alternating low portions known as crenels and high portions called merlons
Protection	Arrow Slits	An arrow slit (often also referred to as a balistraria) is a narrow vertical aperture in a fortification through which an archer can launch arrows or a crossbowman can launch bolts
Defensive	Keep	The main building inside the castle is the keep, which was protected by thick walls and towers
Defensive	Castle doors (oldest surviving castle doors in Britain today)	Doors in the original gatehouse date from 1190 and are made using iron plates clad in oak to stop attackers from burning them down

1.4 People in the castle

1. Ownership of the castle – a, William FitzOsbern -1066-1071, b De Clare family 1071- 1189, c- William Marshal 1189-1219, d-1245 Bigod family, e-1306 pass to the Monarch Edward II
2. Lord and Lady-In charge of local area, administered law and order, Lady run the household/entertaining
3. Soldiers-for protection and to keep watch/patrol
4. Gardner-to grow food in baily areas ie herbs, spices and a kitchen garden. To keep plant clear of walls
5. Carpenter/stonemason -for castle building and maintenance and repairs
6. Fletcher – arrow maker – to provide weapons
7. An English medieval castle, if a large one, could have a household staff of at least 50 people, which included all manner of specialised and skilled workers such as cooks, grooms, carpenters, masons, falconers, and musicians, as well as a compliment of knights, bowmen, and crossbow operators.

1.5 Chepstow Castle after 1300: The Later Middle Ages

1. *Edward II* takes control in 1307 and passes the castle to his favourites, including Hugh Despenser. The castle was garrisoned with 12 knights and 60 footmen for protection from Welsh invasions. 2. *Welsh wars* -Owain Glyn Dwr was likely to attack the castle so it was garrisoned (had an army situated there) in 1415 but he never attacked Chepstow during the Welsh Wars as his army was stopped at Usk 3. *Tudor times* – Sir Charles Somerset who was related to Henry VIII became Earl of Worcester and made key change as custodian of Chepstow castle in the 1500's. He transformed the lower bailey area into a great court and added new windows and fireplaces in Marten's tower. He improved the kitchen area with a new oven and fireplace and made the castle more comfortable and easier for entertaining.

1.6 Changes during the English Civil War: The English Civil war began in England in 1642 between Charles I -Royalist and Oliver Cromwell- Parliamentarian. Chepstow was a strategic location as it controlled the entrance to South Wales and links to Bristol with the River Severn. In 1643 the parliamentarian army advanced into Monmouthshire but did not take Chepstow castle so they forced to retreat. In October 1645 Bristol fell to parliament and Chepstow castle (Royalist) had to surrender after their forces breached the castle defences by concentrating their cannon fire on the curtain wall to the west of Martens tower. Chepstow castle had a store of gunpowder, ammunition and cannons which was taken by parliament. At the end of the war Chepstow castle became a barracks and a prison for political dissidents of Oliver Cromwell. Following the war, the whole southern face of the castle was reinforced with earth and stone as a prevention against further cannon fire. The parapets were remodelled with musket loops. Modern warfare showed that Chepstow castle was no longer protection in times of war. Castles were now obsolete.

1.7 Typicality of Chepstow castle in Medieval times: The Great Hall (built of stone) and dramatic cliff-side at Chepstow are the castle's two most interesting features. The rest of the castle is a typical Norman structure - a large gatehouse with high curtain walls connecting a series of tall towers. It was the first stone castle built as other Norman castles were first built as motte and baileys. Chepstow was built in stages along the river Wye, the castle is constructed in a long, terraced fashion as opposed to a typical concentric layout. The largest castle in Wales, and the second-largest in Britain, Caerphilly Castle was locked within water defences when it was built by the English in the 13th century. Remains of wall-walk and battlements. South-west tower: an open-backed fighting platform on three levels to defend a vulnerable corner of the castle. Arrow loops provide extensive coverage along the curtain wall outside. Gatehouse with murder holes, a portcullis and a drawbridge.

1.8 Decline and Modern times: By 1690 Chepstow Castle was decommissioned and was left empty, falling into disrepair and ruin until it was sold by the Beaufort's in 1914. The final family to own Chepstow Castle was the Lysaghts who acquired the property in 1914, led by tycoon William Royse Lysaght who ordered extensive restoration and conservation work. Chepstow Castle became a popular destination for tourists navigating the Wye Tour, a famous excursion through various scenic buildings and monuments along the River Wye that was popular with British visitors. In 1984, Chepstow Castle came under the ownership of Cadw, the Welsh Government's historic environment division. Today, Chepstow Castle is open to the public as a historical museum and visitor's centre. It continues to be used as a filming location—music videos, feature films, and live performances. It is a historical tourist attraction.

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

KPI1 – Key terms

1. **Conservative plate margin:** Tectonic plate margin where two tectonic plates slide past each other.
2. **Constructive plate margin:** Tectonic plate margin where rising magma adds new material to plates that are diverging (*going apart*).
3. **Destructive plate margin:** Tectonic plate margin where two plates are converging (*coming together*). It can be linked to violent earthquakes and explosive volcanoes.
4. **Earthquake:** A sudden or violent movement within the Earth's crust followed by a series of shocks.
5. **Immediate responses:** The reaction of people as disasters happen in the immediate aftermath (*after-effects of an unpleasant event)*
6. **Long-term responses:** Later reactions that occur in the weeks, months of years after an event.
7. **Monitoring:** Recording physical changes, such as earthquake tremors (*ground shaking)* around a volcano, to help forecast when and were a natural hazard might strike.
8. **Plate margin:** The margin (or boundary) between two tectonic plates.
9. **Planning:** Actions taken to allow communities to response and recover from natural disasters.
10. **Prediction:** Attempts to forecast (predict) where and where a natural hazard might strike based on current knowledge.
11. **Primary effects:** The initial impacts of a natural event on people and property, caused directly by it.
12. **Protection:** Actions taken before a hazard strikes to reduce its impact, such as educating people.
13. **Secondary Effects:** The after-effects that occur as indirect impacts of a natural event.
14. **Tectonic Hazards:** A natural hazard caused by the movement of tectonic plates.
15. **Tectonic Plate:** A rigid (*not flexible*) part of the Earth's curst which moves across semi-molten *(melted)* 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 (*heavy)*
- Continental plate – older, thicker and less dense (*heavy)*

What mechanisms drive plate movements?

Tectonic plates are constantly moving due to:

Convection currents:

1. The Earth's core is extremely hot which causes the mantle to be heated near the core.
2. The hot rock rises towards the surface and cools down.
3. 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.
4. 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 it's 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 –

1. At a **constructive plate margin** the plates move **apart** from one another, causing earthquakes.
2. 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 –

1. 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.
2. 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 from a volcano. The volcanic eruptions are often violent.

Conservative Plate Margin –

1. At a **conservative plate margin**, the plates move past each other or are side by side moving at different speeds.
2. As the plates move, friction occurs and plates become stuck.
3. 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.

	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.

KPI7 – Reducing the impact

1. Monitoring: Seismometers measure earth movement. Volcanoes give off gases.
2. **Protection:** Reinforced buildings and making building foundations that absorb movement.
3. **Planning:** Training for emergency services and planned evacuation routes and drills.
4. **Prediction:** observing monitoring data, this can allow evacuation before event.

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

KPI8 – 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 (*weight of the air).* 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.

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.

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.

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.

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 *(robbing)*
- 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 silts 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.

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
- Greggs Delivery van gave out free food to stranded drivers on A1

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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 warning by reducing the concentration of greenhouse gases in the atmosphere.

Examples:

1. Alternative energy production: Using nuclear power, hydroelectric power and solar power releases less greenhouse gases than burning fossil fuels.
2. 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.
3. Planting trees: Reforestation aims to reverse deforestation by planting trees.
4. 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:

1. Changing Agricultural Systems: Modifying (*changing)* farming to cope with the changing temperatures and rainfall.
2. 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 (*artificial glaciers)* to ensure all places can access water,
3. 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.

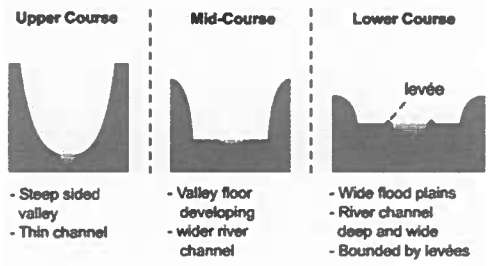
- Middle Course: As the river progresses into the middle course, the gradient becomes less steep. The river channel widens, and the flow of water becomes more meandering. The dominant erosional process shifts from vertical erosion to lateral erosion. The river starts to erode the valley sides and transport 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. I.

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

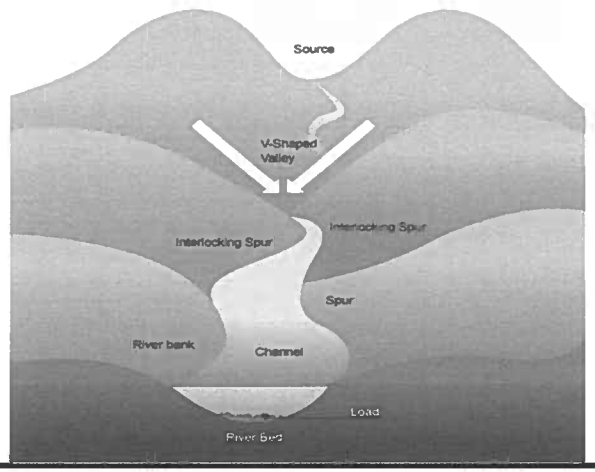
Year 10 – Physical Landscapes in the UK – River Landscapes

- **Abrasion:** Rocks carried along by the river wear down the river bed and banks.
- **Attrition:** Rocks being carried by the river smash together and break into smaller, smoother and rounder particles.
- **Cross profile:** The side to side cross-section of a river channel and/or valley.
- **Dam and reservoir:** A barrier (made on earth, concrete or stone) built across a valley to interrupt river flow and create a man-made lake (reservoir) which stores water and controls the discharge of the river.
- **Discharge:** The quantity of water that passes a given point on a stream or river-bank within a given period of time.
- **Embankments:** Raised banks constructed along the river; they effectively make the river deeper so it can hold more water. They are expensive and do not look natural but they do protect the land around them.
- **Estuary:** The tidal mouth of a river where it meets the sea; wide banks of deposited mud are exposed at low tide.
- **Flood:** Occurs when river discharge exceeds river channel capacity and water spills out of the channel onto the floodplain and other areas.
- **Flood plain:** The relatively flat area forming the valley floor on either side of a river channel, which is sometimes flooded.
- **Flood plain zoning:** This attempts to organise the flood defences in such a way that land that is near the river and often floods is not built on.
- **Flood relief channels:** Building new artificial channels which are used when a river is close to maximum discharge.
- **Flood risk:** The predicted frequency of floods in an area.
- **Flood warning:** Providing reliable advance information about possible flooding. Flood warning systems give people time to remove possessions and evacuate areas.
- **Fluvial processes:** relating to erosion, transport and deposition by a river.
- **Gorge:** A narrow, steep sided valley, often formed as a waterfall retreats upstream

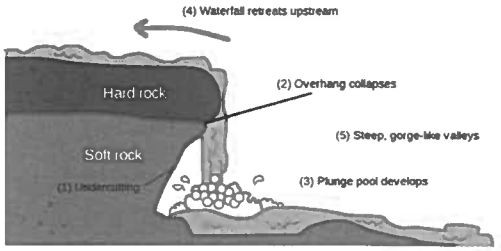
KPI 5 Describe the formation of interlocking spurs

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. Overtime 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.

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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:

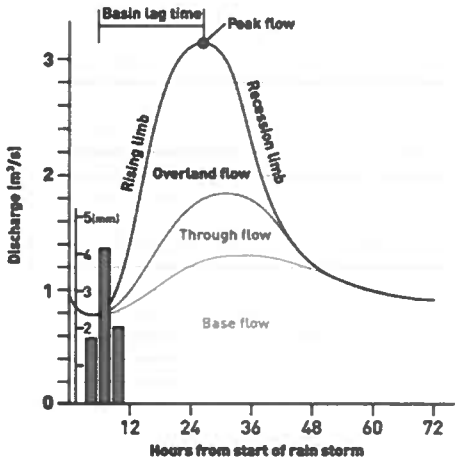
- Step 1: An estuary is formed at the point where a river meets the sea or ocean. The river carries sediment and freshwater downstream, while the sea or ocean brings in tidal currents and saltwater.

- 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 10To 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 ins 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 3 French – Numéro vacances + Notre planète

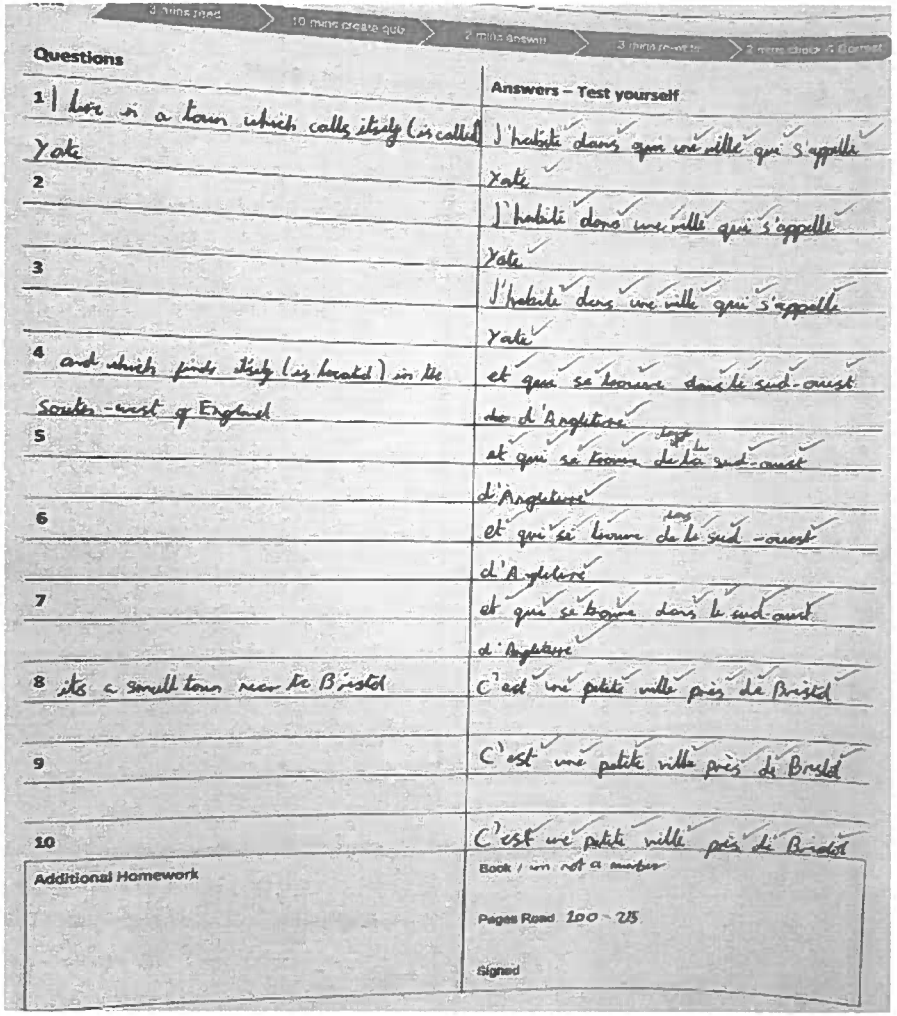
1	I would like to spend my holidays in the countryside.	Je voudrais passer mes vacances à la campagne.
2	We would like to visit the beautiful sites.	On voudrait visiter de beaux sites.
3	You must try the local desserts.	Il faut essayer les desserts locaux.
4	The castle opens at 8 am and closes at midday.	Le château a huit heures et ferme à midi.
5	Last month I went to my uncle's house.	Le mois dernier, je suis allé chez mon oncle.
6	I saw the dancer and I listened to the music.	J'ai vu des danseurs et j'ai écouté de la musique.
7	I spent a week at this hotel.	J'ai passé une nuit dans cet hôtel.
8	There was a pool but my room was not very clean.	Il y avait une piscine mais ma chambre n'était pas très propre.
9	If the weather is good, I am going to do cycling.	S'il fait beau, je vais faire du vélo.
10	This summer I am going to go to Paris by car.	Cet été je vais aller à Paris en voiture.

11	My region is well known for its forests	Ma région est bien connue pour ses forêts.
12	In the north It rains a lot in spring.	Dans le nord, il pleut beaucoup au printemps.
13	The most important problem for the planet is climate change.	Le problème le plus important pour la planète est le changement climatique.
14	Air pollution is a huge problem.	La pollution de l'air est un problème énorme.
15	To protect the environment, you should respect nature.	Pour protéger l'environnement, il faut respecter la nature.
16	You should stop using plastic products.	Il faut arrêter d'utiliser des produits en plastique.
17	I take public transport.	Je prends les transports en commun.
18	It is better for the environment.	C'est mieux pour l'environnement.
19	At our school we avoid food waste.	Dans notre collège on évite le gaspillage de nourriture.
20	We are going to speak at a conference.	On va parler à une conférence.

MFL classroom language

Key Word	Definition	Example
Infinitive	In English it is always accompanied by the word **"TO"**. In French, it always ends in **ER/IR/RE** E.g: **to** play, **to** do, **to** go, **to** go out. jouer / faire / sortir	An opinion is always followed by an infinitive: <u>J'aime</u> jouer/ faire/ acheter <u>I like</u> **to play/to do/to buy**
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. télé-réalité = TV reality
Connectives	A word that links two sentences or ideas together, e.g. et / cependant	What connective can we use to link these two sentences ? • j'aime l'histoire **(mais)** je déteste l'anglais • I like history **but** I hate English
Intensifiers	A word that strengthens the meaning of other expressions and shows emphasis, e.g. très/assez	Every time you write an adjective, make sure you use an intensifier before it. • je pense que le sport est très important

Example of what LSQs for MFL should look like:



Questions	Answers – Test yourself
1 I live in a town which calls itself (is called) Yate	J'habite dans une ville qui s'appelle Yate
2	Yate J'habite dans une ville qui s'appelle
3	Yate J'habite dans une ville qui s'appelle
4 and which finds itself (is located) in the South-west of England	Yate et qui se trouve dans le sud-ouest de d'Angleterre
5	et qui se trouve dans le sud-ouest d'Angleterre
6	et qui se trouve dans le sud-ouest d'Angleterre
7	et qui se trouve dans le sud-ouest d'Angleterre
8 it's a small town near to 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 1 on not a matter Pages Read 100 - 25 Signed

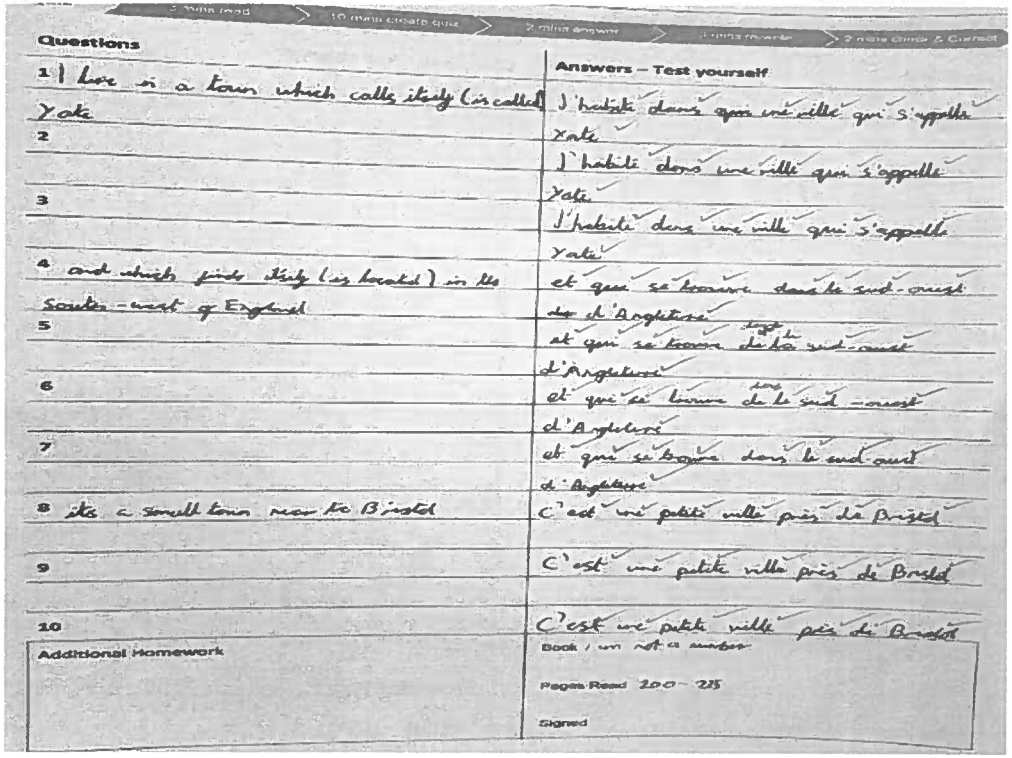
Year 10 Term 3 Spanish - A clase + Mi barrio y yo

1	Normally I go to school by foot.	Normalmente voy al insti a pie
2	I am a member of the dance club	Soy miembro del club de baile
3	My favourite subject is Spanish	Mi asignatura favorita es el espanol
4	because it allows you to learn about other cultures	porque te permite aprender sobre otras culturas
5	I would improve the food in the canteen.	Mejoraría la comida en el comedor.
6	You must not use your mobile in school	No se debe usar tu móvil en el insti
7	My maths teacher is hardworking but strict.	Mi profe de matemáticas es trabajador pero estricto.
8	I'm a good student and I study a lot for exams.	Soy un buen alumno y estudio mucho para los exámenes.
9	Recently I went to Mardid with my class and it was fun.	Recientemente fui a Madrid con mi clase y fue divertido.
10	The first day the weather was bad.	El primer día hizo mal tiempo.
11	I have visited the science museum.	He visitado el museo de ciencias.
12	I like my neighbourhood because there is a park.	Me gusta mi barrio porque hay un parque.
13	Now my town is modern and quiet.	Ahora mi pueblo es moderno y tranquilo.
14	Before, my town was more industrial.	Antes, mi pueblo era más industrial.
15	Usually I buy brand name clothes.	Generalmente compro ropa de marca.
16	Last Saturday I bought black shoes and a skirt.	El sabado pasado compre zapatos negros y una falda.
17	I prefer to live in a city more than the countryside.	Prefiero vivir en una ciudad más que en el campo.
18	I would improve the transport network.	Mejoraría la red de transporte
19	I live in a flat. It has two bedrooms.	Vivo en un piso. Tiene dos habitaciones.
20	We went to the cinema and we are going to go to the park.	Fuimos al cine y vamos a ir al parque.

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/solía, 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 ingles • 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 LSQ:



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10	C'est une petite ville près de Bristol
Additional Homework	Book / un cd a number Pages Read 200 – 225 Signed

Full course Year 10 GCSE Paper One –Buddhist belief and teaching

Key terms:

Dhamma	**The Buddha's teachings – how to reach the state of enlightenment**
Dependent arising	**The idea that everything is dependent on everything else**
Anicca	**One of the three marks of existence- impermanence**
Anatta	**One of the three marks of existence- no fixed self**
Dukkha	**Suffering or dissatisfaction – something Buddhists seek to overcome**
Siddhartha Gautama	**The religious teacher and founder of Buddhism**
Buddha	**An enlightened being**
Jakaka 075	**A book of popular tales about the life of the Buddha**
Nibbana	**A state of complete enlightenment which lies outside the cycle of samsara**
Tanha	**Craving – second noble truth**
Enlightenment	**A state of spiritual wisdom which arises from understanding the nature of reality**
Ascetic	**A lifestyle of strict self-denial – rejected by Siddhartha for the Middle Way**
Three watches	**Three realisations Siddhartha made in order to become enlightened**
Samsara	**The cycle of life, death and re-birth**

KPI1: Buddha's early life and four sights

Buddha means 'enlightened'. Siddhattha Gautama, was a prince born into a rich family. He had an easy life in **luxury**, living in what is now Nepal.

He was inspired to leave this life by the **Four Sights.**

The Four Sights Siddhartha saw on his trip outside the palace were:

1. An old man – everyone ages
2. An ill man – everyone becomes ill
3. A dead man – all things die
4. A holy man – the only answer to these problems

KPI2: Buddha's enlightenment and the three watches

After seeing the four sights, Siddhartha rejected his life of luxury and left the palace. Siddhartha lived for six years as an **ascetic** (someone who denies themselves worldly pleasures).

After this time, he realised that this was not the answer and came up with the idea of the **'Middle Way'** between luxury and asceticism.

Siddhartha meditated under a tree and was tempted by the demon **Mara.** Over three watches of the night he became **enlightened** and from then on known as the **Buddha.**

The three watches of the night

- **All previous lives**
- **The cycle of samsara (life, death and rebirth)**
- **All beings suffer (Dukkha)**

KPI3: To examine what is meant by the three marks of existence.

The Three Marks of Existence are the fundamental Buddhist beliefs about the nature of human existence.

1. **Suffering (Dukkha):** Suffering is part of the human condition, a natural result of anatta and anicca. It can only be overcome by becoming enlightened.
2. **Impermanent (Anicca)** that everything is impermanent and continually changing. Failure to recognise this leads to clinging and suffering.
3. **Having no permanent self (Anatta).** The Buddha taught that there is no fixed part of a person that does not change. There is no permanent self.

KPI4: To understand why the four noble truths are important to Buddhist

I teach suffering, its origin, cessation and path. That's all I teach"

1. The truth of suffering (**Dukkha)** Suffering comes in many forms.: old age, sickness and death.

2.The truth of the origin of suffering. The three roots of evil**/three poisons** Greed and desire.

One of the main causes of suffering is tanha or craving

KPI5: To understand why the four noble truths are important to Buddhists.

3. The **third** noble truth teaches that there is an end to suffering. It can be achieved by overcoming ignorance and craving.

- **Nibbana** literally means the extinction- the extinction of the three poisons.

4. The fourth noble truth **'magga'** is seen as the cure to end suffering.
   The fourth noble truth is the **eightfold path**, which consists of 8 aspects that Buddhist can practice and follow in order to achieve **enlightenment.**
   The eightfold path is split into ethics, mediation, wisdom.

Year 10 Full course RE AQA Religious Studies A – Theme B: Religion and Life

Key Words			
Abortion	The ending of a pregnancy	Liberal	A type of Christian who reads the Bible as stories, myths and metaphors
Big Bang Theory	Scientific theory of the creation of the universe through a large explosion	Literalist	A type of Christian who believes the Bible is literally true + the word of God
Dominion	The power humans have over God's creation	Natural Resources	Materials found in nature (e.g. coal, oil) which are exploited by humans
Euthanasia	The painless killing of a terminally ill patient	Purgatory	Where Catholics believe souls are purified after death + before heaven
Evolution	Scientific theory of the development of humans from apes	Quality of Life	How easy or difficult someone's life is – e.g. cancer causes a low quality of life
Heaven	Paradise where those judged good go after death to be forever with God	Sanctity of Life	The belief that all life is sacred as man is made in God's image
Hell	Damnation where those judged bad go after death to be forever without God	Stewardship	The responsibility God gave humans to look after the world
Judgement	After death Christians believe you are judged by God	Vegetarian	The choice not to eat animals

Key Ideas		
	Christian Ideas	**Scientific Ideas**
Ideas about Creation	- Designed and made by God - The creation story in **Genesis 1** says that God made the world in six days - **Literalist Christians** believe this is factually true and that God created Adam + Eve - **Liberal Christians** say the creation story in the Bible is just a story and may agree with scientific ideas about creation *"In the beginning God created the heavens and the earth" – Genesis 1:1*	- The **Big Bang Theory** argues that the universe started as a dense collection of mass which massively expanded creating stars, galaxies and planets - The **Theory of Evolution** comes from Charles Darwin who observed that animals change over time and argued that humans were not designed by God but evolved from apes - These theories do not fit with a **literalist Christian's** view but could fit with a **liberal** view

<table>
<tr><td>Stewardship + Dominion</td><td><u>Stewardship</u>
- Stewardship means Christians have a duty to look after the environment on behalf of God and for future generations
- This can be seen where Christians campaign for environmental charities or choose to reduce waste and recycle
"Rule over [..] every living creature" - Genesis 1:28</td><td><u>Dominion</u>
- Dominion is the idea that God gave humans power and authority over the world
- Some Christians believes this allows them to use natural resources (e.g. oil and coal) and animals to make their lives better
- In Genesis God gives Adam and Eve the power to name the animals and rule over them</td></tr>
<tr><td>Abortion</td><td colspan="2">- Abortion is the removal of a foetus from the womb in order to end a pregnancy.
- In the UK (except Northern Ireland) it is legal during the first 24 weeks of pregnancy unless the mother's life is in danger or the foetus is severely deformed.

☒ The Catholic Church is strongly against abortion. They believe in sanctity of life, the idea that life is a sacred gift from God which only God can take away. They see the foetus as a living thing.
☑ The Church of England think abortion is sometimes acceptable as a pregnancy as a result of rape or where the child would be very ill would lead to a very poor quality of life</td></tr>
<tr><td>Euthanasia</td><td colspan="2">- Euthanasia is the painless killing of a patient with a terminal illness.
- Voluntary euthanasia is where the patient asks for their life to be ended.
- Non-voluntary euthanasia is where the patient is not capable of asking to die, perhaps in a coma.
- All forms of euthanasia are currently illegal in the UK.

☒ The Catholic Church is strongly against euthanasia. They believe that only God can give and take life and that life is sacred (sanctity of life)
☑ Some liberal Christians think euthanasia can be an act of mercy which Jesus tells them is a good thing to do, this is especially the case when someone's quality of life is very poor.</td></tr>
<tr><td rowspan="2">The Afterlife</td><td colspan="2">- Christians believe that when you die you will be judged and that those who are found to be good will go to heaven but those who have sinned and gone against God's wishes will go to hell.</td></tr>
<tr><td>Roman Catholics believe that there is a middle stage called purgatory where souls go to be purified of sin before they go to heaven</td><td>Some Christians believe that Jesus will return on a future Day of Judgement when all souls will be judged</td></tr>
</table>

Art Year 10 - Identity

Formal Elements	Definition	Example	Painting Techniques
Line	A mark that connects two or more points.	These can be straight, curved, short or long. Specific types of line include: outline (generally a black line that goes around an image) and continuous line (a line in which you do not take your pencil/pen of the page)	**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
Tone	The lightness or darkness or something.	For darker tones use a higher grade B pencil. For architectural drawings you should use a H pencil as this will give your crisper lines without tone smudging.	
Colour	Colour is what you see when light reflects of something.	Primary Colours - can't be made by mixing colours together (Red, Yellow & Blue) Secondary Colours - mix two primary colours together (Green, Orange & Purple) Tertiary Colours - mix a primary and secondary colour together (Blue + Green = Turquoise) Complementary Colours - Colours opposite each other on the colour wheel (Orange/ Blue, Green/Red and Purple/Yellow)	
Texture	How something looks or feels.	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 Adjectives to describe different textures - fluffy, rough, smooth, soft, bold, uneven, slimy, faint, chalky, tacky etc.	
Pattern	A symbol, shape or colour that repeats.	Man-made patterns are designed by humans, natural patterns are formed by nature. Patterns can be orderly, uniform, geometric, random or symmetrical.	
Shape & Form	Shape is 2D. Form is 3D.	2D shapes include rectangles, squares and triangles. Geometric shapes are angular and have straight lines. Organic shapes have curved lines. 3D shapes include cylinders, spheres and cubes.	

Keywords		Key Process to develop ideas	Tips, Tools & Techniques	Artists that explore Identity
Observational Drawing	Drawing something from real life in front of you.	**Copy of an Artwork** 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. **Annotating** Writing about and evaluating your own and others' work.	**Blender Stick** A paper stump that allows you to blend tones. **Blending** The smooth transition between tones. **Grid Method** Using a grid to ensure you draw in proportion. **Shading Techniques** Hatching, Cross-Hatching, Stippling and Scumbling. **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.	• **Beau Bernier Frank** • **Barbara Kruger** • **Molly Crabapple** • **Frida Kahlo** • **Cindy Sherman** • **Sandra Chevrier** • **Shirin Neshat** • **Tracy Emin** • **Pepon Osorio** • **Jenny Saville** • **Kehinde Wiley** • **Alexandra Ievasseur** • **Aldo Tambellini** • **Loui Jover**
Primary & Secondary Sources	Primary = real objects or your own photos that you have taken yourself Secondary = an image from the internet or books			
Proportion	The size and relation of objects to one another. Using the grid-method is one way of helping you draw using accurate proportions.			
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.			
Cultural Identity	Cultural identity is the identity of belonging to a group. It is part of a person's self-conception and self-perception and is related to nationality, ethnicity, religion, social class, generation, locality or any kind of social group that has its own distinct culture.			

Drama Y10 Script work

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

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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.

P19

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.

Drama - Base work

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 ue 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 my 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.

Year 10 Photography—Unit 1 Term 3

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

Photography techniques

Affinity Photo 2 edits:

Threshold– high contrast black and white, to enhance texture.

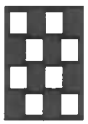
Halftone– adding the halftone (dot) texture and one colour.

Blending modes– layering images over each other, with different effects.

Gradient map– add colour gradients to an image.

Opacity– making a layer transparent.

Outlining—use of negative line to outline an object.



Adding a new pixel layer

Adding an adjustment layer

Camera settings

A-DEP Automatic Depth of Field

M Manual

AV Aperture – Priority

TV Shutter —Priority

P Programmed Automatic

Scene Intelligent Auto

No Flash

Filming

Night Portrait

Sports

Macro

Landscape

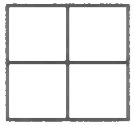
Portrait

Creative Auto

P22

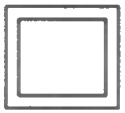
Composition

Centring



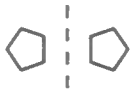
Centreing is a composition tool, where you arrange your image with the focal point in the middle. This creates a calm and pleasing composition.

Frame within a frame



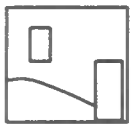
Frame within a frame is a composition tool, where you have the outline of the photograph as the first frame and a second frame within the photograph. One example would be an archway, which frames a scene through the doorway.

Symmetry



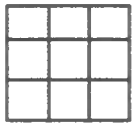
Symmetry is a composition tool, where you have a mirroring in the image. This creates a balanced composition and can create a pattern if repeated.

Balance



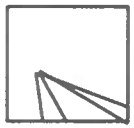
Balance is a composition tool, which pairs well with rule of thirds. If you have a large focal point on the right hand side of the frame, balance would be making sure there is a smaller object on the left to act as a second focal point.

Rule of thirds



Rule of thirds is another composition tool, where you place the focal point off centre using the grid, to create balanced and intriguing images.

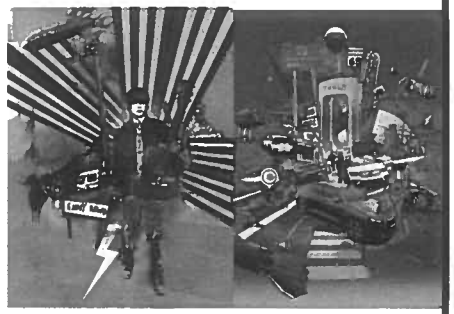
Leading lines



Leading lines is a composition tool, where you have lines in the photo that lead the eye towards the focal point.

Negative space

Tim Marrs— British Illustrator



How does Tim Marrs create his work?

In his collages, Tim Marrs pieces together diverse visual elements to create colourful works of art. With computer manipulation, he seamlessly merges drawings, photographs, silkscreen prints and movie posters.

He combines photos with drawings and patterns. Using contrast colours to create striking, eye catching illustrations.

Digital photo manipulation

Using Affinity Photo2:

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.

BTEC 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 '20s.

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

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.

Year 10 Economics Knowledge Organiser

GOVERNMENT MACROECONOMIC OBJECTIVES - The main macroeconomic objectives of the government include:
. Sustainable economic growth (increasing national income per person) 2. Low unemployment - (full employment) 3. Low inflation. - Price stability) 4. Fair distribution of income (a degree of equality) 5. Satisfactory Balance of Payments (balancing exports and mports) 6. Supporting a stable exchange rate 7. Low government borrowing 8. Considering the environment and the sustainability f economic growth

GOVERNMENT SPENDING
Providing benefits to those on low incomes/unemployed ıay create a disincentive to work. Because if you gain more ıcome, you may lose benefits.
The government sector may be more inefficient than the rivate sector because there is not a profit incentive to cut osts.
The government may have poor information about the best roject to spend on. For example, the government choose :ye-catching' investment schemes like HS2.

ECONOMIC GROWTH vs SUSTAINABILITY
• An increase in national output causes greater consumption of goods and
services. It can lead to higher pollution and a loss of non-renewable resources.
Growth can conflict with environmental sustainability.
• However, if growth comes from improved technology (e.g. renewable energy),
then it is possible to have growth without any significant environmental costs.

BENEFITS OF GROWTH
Higher Incomes. Consumers will be able to enjoy more ıods and services.
Lower unemployment: With higher output firms will employ ore workers.
sustained period of economic growth will lead to lower ıemployment.
Lower Government Borrowing. Economic growth creates gher tax
:venues and there is less need to spend money on ıemployment benefits.
ıis reduces government borrowing.
Improved public services. With higher tax receipts more ın be spent on
ıblic services, such as health care and education.
Firms make more profit. Firms will make higher profit; this ay encourage
ore investment, which leads to a virtuous circle of higher owth.

COSTS OF GROWTH
1. Inflation. If economic growth is too fast then economic growth will be unsustainable and inflationary. There will be a negative output gap and firms will respond by putting up prices. However, if growth is moderate, it will not cause inflation.
2. Boom and Bust Economic Cycles. If economic growth is unsustainable then high inflationary growth may be followed by a recession (fall in output). For example, the late 1980s boom and recession of 1991.
3. Balance of Payments Deficit. Economic growth may cause higher consumer spending on imports therefore causing a deficit on the current account. However, if growth is export-led, this will not occur.
4. Environmental Costs. Increased economic growth will lead to increased output and therefore will cause increased pollution and congestion which reduces living standards. Economic growth can conflict with environmental sustainability.
5. Increased Inequality: Higher rates of economic growth have often resulted in increased inequality. This is because the wealthy may benefit more from economic growth.

ECONOMIC GROWTH
• Economic growth means an increase in real GDP. An increase in GDP means
an increase in the volume of goods and services produced in an economy.
• The rate of economic growth measures the annual % change in real GDP

GROSS DOMESTIC PRODUCT
• Nominal GDP This is a measure of national income, output and expenditure.
This is the monetary value of all goods and services produced in the economy.
• Real GDP This is national income measured in constant prices. It means we
take into account inflation.
• Real GDP per Capita = This is the real GDP / population.

ECONOMIC GROWTH vs INFLATION
• If there is an increase in the rate of economic growth it could lead to inflation.
• With higher demand, firms will get closer to producing at full capacity. If there
is excess demand, they will respond by putting up prices.
• With higher economic growth, firms will employ more workers leading to
lower unemployment. However, lower unemployment and a shortage of
workers may push up wages. Higher wages can cause inflation.
o However, if economic growth is sustainable and there is an increase in
productive capacity, then inflation may not occur.

IMPACT OF GROWTH
1. Lower unemployment. Higher output means firms need more workers
leading to higher employment levels and lower unemployment.
2. Lower government borrowing. With higher economic growth, the
government will see an increase in tax receipts.
3. Higher living standards - wages and profits generally rise during a period of
economic growth.

Year 10 Economics Knowledge Organiser

P.1.1 – INTEREST RATES – Interest rates determine the amount of interest payments that savers will receive on their deposits.
An **increase** in interest rates will make saving more attractive and should encourage saving.
A **cut** in interest rates will reduce the rewards of saving and will tend to discourage saving.

Example of interest rate changes
- £20,000 Loan at interest rate of 7%
- Annual interest rate payment will be 0.07 * 20,000 = £1,400
- If interest rates rise to 9%
- Annual interest rate payment will rise to 0.09 * 20,000 = £1,800
- The rise in interest rates will cost households an extra £400 a year. This will discourage borrowing.

Example of saving rate changes
- £7,000 savings at 4%.
- Annual interest payments received will be 0.04 * 7,000 = £280
- If interest rates rise to 6%
- Annual interest payments received will be 0.06 * 7,000 = £420
- With higher interest rates, it is more attractive to save money in a bank

Interest rates are not the only factor which determine demand for loans and saving
- If a firm experiences a rise in demand it will want to invest in increasing capacity – even if interest rates rise.
- In a recession, low interest rates may be insufficient to encourage borrowing.
- Some firms may want to borrow, but banks may refuse to give a loan because they don't have confidence in their ability to repay.

DIFFERENT TYPES OF TAX
1. **Direct tax** – tax taken from your wage before it is paid to you, e.g. income tax.
2. **Indirect tax** – tax paid for by a company, e.g. VAT. Therefore you the cost of goods will be higher so the firm can pay the indirect tax on your behalf.

EXAMPLES OF TAX
Income tax. This is a direct tax on people's income. The basic rate is 22%.
- **National Insurance.** Similar to income tax this is a % of income, the money is targeted for social security payments (pensions, unemployment benefits
- **VAT** (Value Added Tax). This is an indirect tax. It is included in the price of most goods and services in the economy. It is currently 20%.
- **Excise duties.** These are specific taxes on goods such as alcohol, cigarettes and petrol.
- **Corporation Tax.** This is a tax on company profits.
- **Stamp Duty.** This is a tax on buying a house.
- **Council Tax.** Local authorities collect this tax. It is related to the value of your home so has some relation to your wealth.

INCREASE IN GOVERNMENT SPENDING
An increase in real government spending could imply:
- More investment in education and infrastructure. The government can use tax revenues to overcome market failure in areas such as transport, education, and health.
- Provide public goods. Some goods like defence and law and order would not be provided at all in a free market.
- Provide important public services. In a free market there would be under-provision of health care and education. The government provide these services directly at the point of use.
- Investment in infrastructure. The government can invest in public transport and roads to help provide a stronger infrastructure of the economy.
- Redistribution. The government can spend money to redistribute income amongst people on low incomes. For example, universal credit and unemployment benefits. This can help promote a more equal society and improve economic welfare.
- Fiscal policy. In a recession, government spending may be effective in stimulating the economy, e.g. government borrowing can offset a rise in private sector saving, and increase AD.

PURPOSE OF TAX
1. Raise revenue for the government to spend on public services.
2. Redistribute income. Progressive taxes like the higher rate of income tax take a higher % of income from high earners.
3. Discourage consumption of certain goods. Higher taxes on petrol and tobacco discourage consumption of these goods.

IMPACTS OF TAX
- **Progressive** – a progressive tax takes a higher % of income from high earners, e.g. Higher rate (45%) of income tax on incomes over £100,000.
- **Proportional** – Takes the same % from everyone regardless of income.
- **Regressive** – A regressive tax takes a higher % from low-income earners, e.g. Excise duty (cigarette tax, alcohol tax)

IMPACT OF TAXES INCREASING
1. Increase revenue for government
2. Makes the tax system more progressive. People on higher incomes will pay a higher % of their income in tax.
3. Could create disincentives to work. Higher income tax may create a disincentive for people to work overtime or even take a job; it could encourage people to live abroad and avoid paying higher tax.
4. Could encourage tax avoidance – people work abroad or hide income.

GOVERNMENT SPENDING
Government spend tax revenue on a range of services, such as health care, education and national defence.
Real government spending — Spending levels adjusted for inflation.

BUSINESS: *Creating informed, discerning employees, consumers and future leaders*

Topic 2.1.1 Business Growth

Key Vocabulary

Organic Growth – growing through internal growth

Innovation – adapting existing products to develop improved versions

R&D – research and development. The activities to research and develop new products

Marketing Mix – the 4 Ps: Price, Place, Product, Promotion

Inorganic growth – growing through mergers or takeovers

Merger – when two firms mutually join together

Takeover – when one firm buys another one

PLC – Public Limited Company. A business that sells its shares on the stock exchange

Retained profit – profit left after the business has paid dividends and taxation

Selling assets – the sale of items the business owns

Loan capital – finance received from a bank when taking out a loan

Share capital – the money invested into a business by shareholders

Core Knowledge

A business can grow internally by expanding its own activities, i.e. opening more outlets, selling more, targeting new markets or increasing the range of products.

External growth is quicker but more expensive and riskier.

Mergers & takeovers could be between competitors, suppliers, customers or unrelated businesses.

A business may choose to finance growth through becoming a PLC and selling shares on the stock exchange.

A quicker way to open lots of outlets is through offering franchises – when you allow entrepreneurs to use your business name.

Larger firms benefit from economies of scale, so can reduce their unit costs.

Growing too large can increase costs and lead to diseconomies of scale.

Don't be a "man on the street"

- Not all businesses are companies
- Not all companies are PLCs
- Not all takeovers and mergers are allowed to happen

Wider Business World

The planned merger of Sainsbury and ASDA – was not allowed

Iberia and British Airways merger

Sainsbury and Argos merger

Quote from the founder of Iceland "businesses can't stand still"

Synoptic Links

Ownership – knowing what a private limited company is

Sources of finance for small businesses – most of these are available for growing businesses too

Interest rates – the rate will affect the cost of borrowing

Economic influences – the state of the economy will impact whether a business can grow

Marketing Mix

BUSINESS: *Creating informed, discerning employees, consumers and future leaders*

Topic 2.1.2 Changing business aims and objectives

Key Vocabulary

Aim – something the business is trying to achieve

Objective – a more specific breakdown of an aim

Survival – generating enough revenue to cover costs and therefore continue to trade

Workforce – the number of employees a business has

Product range – the variety and number of products a business sells

Entering markets – when a business decides to open up in a market it hasn't been in before, e.g. If McVities starting making crisps

Exiting markets – choosing to leave a market, e.g. when Tesco sold all their optical stores

Core Knowledge

A business has to continually change and evolve over time. Therefore, what it is attempting to achieve will also change. Aims change because of:

- Changing **market conditions** – an increase or decrease in the number of competitors
- Changing **technology** – the rise of e-commerce led to businesses introducing online sales; click and collect, self-service tills
- Changing **performance** – if a business is not making as much profit as before, it will need to change its aims
- Changing **legislation** – new laws can affect costs and so a business may need to change aims
- **Internal** reasons – an arrival of a new CEO can affect the direction of the business

How aims change:

- Focus on survival or growth
- Entering or exiting markets
- Growing or reducing a workforce
- Increasing or decreasing a product range

Don't be a "man on the street"

- Remember that businesses have to continually adapt and change in order to be successful
- Remember that reducing the workforce by making staff redundant will have a large short-term cost

Wider Business World

Tesco – changed focus back to food after rise of Lidl and Aldi

Iceland – increasing non-food range to be more competitive

Kodak – an example of company that did not keep up with technology and left the camera market

Synoptic Links

Dynamic nature of business – business has to continually evolve

Aims and Objectives – the difference between the two, examples and how they might be suitable

External influences – the factors outside a business's control that can influence their actions

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Topic 2.1.3 Globalisation

Key Vocabulary

Globalisation – tendency for economies to trade with each other and buy global goods

Export – selling goods or services to consumers in another country

Import – buying goods or services from businesses in another country

MNC – Multinational Company. A business that has operations in more than one country

Free trade – trading between countries with no barriers

Trade barriers – an action put in place to discourage free trade / protect the businesses of a specific country

Tariffs – taxes changed on imports

Trading blocs – a group of countries that have agreed free trade within external tariff walls, e.g. the EU

e-commerce – buying and selling goods online

Core Knowledge

Types of imports into the UK:

- Goods we cannot grow or produce, e.g. olive oil
- Goods that require a lot of labour, so is cheaper to make where wages are lower
- Goods that are made in the UK, and elsewhere, but consumer may prefer a foreign produced item, e.g. Audi cars

To export successfully a business must:

- Keep costs down to be competitive
- Produce original, well-designed and well-made items
- Deliver on time and provide excellent service and after-sales service

Barriers to international trade can be set as a government might want to protect domestic industry and reduce competition. On way is to charge a tax or tariff on all imported goods increasing the cost of imports

How to compete internationally

- Use of the internet and e-commerce
- Changing the marketing mix
  - Different products for different counties, e.g. left- and right-hand drive cars
  - Charging different prices based on popularity and reputation
  - Adapting promotion to reflect cultural differences
  - Using retailers in countries where e-commerce is not well established

Don't be a "man on the street"

- Remember that income levels, technology access etc is widely different across the world, so don't fall into the trap of "everyone has the internet" – in some countries less than 10% do
- Remember that the names or goods, images of people using it or the promotion may need to be adapted to fit local culture and traditions

Wider Business World

Jaguar Land Rover – has factories in China, Brazil, Austria and Slovakia

McDonalds – has different menus in different countries, e.g. no beef in India

Synoptic Links

Technology – made e-commerce easier, increasing globalisation

Exchange rates – changing rates affect the cost of importing and exporting

Growth – expanding overseas is easier due to globalisation

Customer needs – a business must understand the needs of different countries / cultures

Marketing mix – there is an impact on all 4 Ps

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Topic 2.1.4 Ethics and Environmental constraints

Key Vocabulary

Ethical considerations – thinking about ethics, which may lead to making morally valid decisions or lead to the manipulation of customer attitudes

Ethics – weighing up decisions or actions based on morality not personal gain

Fair Trade – a social movement whose goal it is to help producers in developing countries achieve better trading conditions and promote sustainability

Trade-offs – having more of one thing may force you to less of the other

Environment – condition of the natural world that surrounds us which is damaged when there is pollution

Environmental considerations – factors relating to green issues, such as sustainability and pollution

Sustainability – whether or not a resource will inevitably run out in future. A sustainable resource will not

Core Knowledge

Ethics are moral guidelines – it is doing MORE than the legal minimum.

Ways for a business to be ethical:

- Pay a fair wage to workers
- Pay suppliers a fair price and on time
- Ensure production does not harm the environment, animals or people
- Label products clearly and correctly

Ways to consider the environment:

- Reduce / minimise pollution
- Only use sustainable resources
- Reduce packaging

Being ethical and environmentally friendly can increase costs leading to a reduction in profit. This can be considered a trade-off.

Benefits can include improving customer image and easier recruitment

Don't be a "man on the street"

- Remember that Fair Trade is NOT a brand name or a business
- Avoid the 'all', 'everyone' comments, e.g. 'everyone will pay more for ethical goods'; some will, some simply can not afford to or will choice to ignore ethics

Wider Business World

Body Shop – never tested products on animals; had a bottle recycling scheme

Marks & Spencer – Plan A for environmental sustainability

Starbucks – saw a drop in sales after it was announced it avoided paying UK taxes

Synoptic Links

Aims and Objectives – social objectives

External influences – changes to legislation can encourage a business to be more ethical or environmental

Customer needs – consumers have more interest in ethical products

Marketing mix – aiming to be more ethical or environmental can affect element of the 4 Ps

Subject: GCSE PE 1.2 a

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

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)

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

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'.

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

Subject: GCSE PE 1.2 b

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 athletes 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 HITT 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

Subject: GCSE PE 1.2 c

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

Subject: GCSE PE 2.1 a

Engagement patterns of different social groups in physical activities and sports

Physical activity and sport in the UK.

Be familiar with current trends in participation in physical activity and sport-

Participation By Gender-

Children and young people-
Boys (51% or 1.8 million) are more likely to be active than girls (43% or 1.5 million)
Adults-
Men (65% or 14.2 million) are more likely to be active than women (61% or 14.2 million).

Participation by age

- The proportion of adults taking part in at least one sport or physical activity decreases with age (except for walking)

Proportion of adults who take part in at least one sport or physical activity (including walking)	
16-24 year olds	65-74 years
84%	83%

Proportion of adults who take part in at least one sport or physical activity (excluding walking)	
16-19 year olds	70+ years
55%	19%

Activity levels of adults generally decrease with age. The sharpest decrease is at age 75+

Disability

Proportion of adults with a long term limiting illness or disability that played sport once a week

2015/16	2017/18
60.9%	61.8% *

* compared to 81.6% without a disability.

Adults
Activity is less common for adults with limiting disability and long-term health conditions. Activity levels decrease sharply the more impairments and individual has. Just 39% of people with 3 or more impairments are active.
Children
Children and young people with a disability or long term health condition are more likely to be less active than those without.

Socio-economic groups

The rate of participation among people aged 16 and over is greater in those from higher socio-economic groups (more money) than those from lower socio-economic groups(less money).

Proportion of adults who take part in at least one sport or physical activity	
Higher socio-economic groups	Manual and unemployed socio-economic
71%	54%

Ethnicity

Proportion of adults who play sports once a week	
	2017/2018
Black and other minority ethnic groups	57%
White British groups	63%

Among women, those from white backgrounds are more likely to take part in sport compared to those from Chinese, black and other ethnic backgrounds.

Both sources- Sport England – Active Lives Adult Survey 2017/18

Participation in physical activity and sport

Understand strategies which can be used to improve participation-

Promotion- Advertising the opportunities to be involved and offering trials/discounts.

Provision- Funding a range of facilities across many activities and locations.

Access- Ensuring that everyone is able to get their local facilities by improving infrastructure.

Understand how different factors can affect participation-Age- Average life expectancy has risen, so more and more people could participate. There is an increase in the number of teams for older people (veterans teams). Sport is often perceived as a 'young person's activity'.Some older people lack confidence to participate. Some older people's participation may be affected by medical conditions or illness.

Some activities have age restrictions-minimum age for London Marathon is 18 years/minimum age is for Olympic snowboarding is 15 years/some fitness gyms have a minimum age restriction.

Some NGBs have regulations that restrict the age gap between players (2 years etc.)- In rugby players Under 12 years of age cannot 'play up'.

Many NGBs have developed adaptations of their sport that are suitable for older people- Walking netball, walking basketball and walking football are examples.

Gender- There are far more men than women who get involved in sport either to participate or spectate. Women's opportunities at elite level are growing all the time. With an increase in the women's sport profile, sponsorship and financial gain is becoming more readily available. Many female sports have seen a rise in media coverage and ultimately popularity. Opportunities for female officials and management roles within teams have grown too and there are a great deal more female presenters on TV.

Barriers to women playing sport are…
Lack of time and childcare
Lack of self confidence
Personal safety
Parental and adult influence
Male dominated culture of sport
Funding
Body image
Lack of media exposure
Lack of role models
Sexism

Ethnicity/Religion/Culture- The number of both black and minority ethnic and white British adults playing sport is increasing. Taking up a sport or activity may be influenced by ethnic background e.g. cricket is very popular within Asian countries. Some cultures or religious beliefs may act as barriers- can't drive on Jewish Sabbath/women wearing certain clothing/some cultures spend more time with family- less time available/religious commitments such as ceremonies give less time for sport/some ethnicities have larger proportions of lower socio-economic groups- less income for sport.

Family- You are more likely to participate in sport if your parents do. You are less likely to participate if there is little interest shown by your family.

Family support is crucial: Transport/Equipment/kit costs/Membership/match fees/Teaching sporting etiquette/sportsmanship

Negative influences might include: Poor sportsmanship/deviance/Unrealistic expectations/Placing undue pressures on children/Keeping children away from peers to gain higher levels of competitions.

Disability- Participation rates have increased since 2012 London Paralympic Games, but overall those with a disability show a comparatively low percentage in participation. This may be due to the lack of adapted equipment, access, clubs, discrimination and/or a lack of confidence.
Media coverage- some sports get a great deal more media coverage than others which makes them more popular e.g. football vs hockey. Male sport still dominates although there is much more interest in women's sport in recent years due to increased success e.g. GB women's football. The media can stimulate participation in sports e.g. huge increase in tennis participation during Wimbledon as people watch it on TV and want to participate themselves.
Environment and climate – this can dictate which sports/activities people take part in e.g. if you live in an area that receives regular snow and has hills, then you are more likely to ski than someone who doesn't.
Cost/disposable income- Some activities/equipment/kit are too costly for everyone to be able to participate.
Discrimination may prevent certain people from participating in a sports activity, due to: Race/colour: in some countries certain ethnic minorities are prevented from joining clubs/Gender:golf clubs not allowing women to participate at certain times or not at all leisure centres having female only fitness classes/Disability: people with disabilities not being allowed to join certain clubs/Age: clubs making an upper age limit for membership to prevent older people joining.
Opportunity/Access- You may not have appropriate sports clubs or facilities near you which may prevent you from participating. Some local authorities provide transport to help increase participation e.g. buses to leisure centres for elderly people.
Role models- Like parents, other significant others can influence whether you participate in sport. These may include: High level performers you have seen or read about in the media/Players in an older team at your club/PE teachers/Sports coaches who visit your school to coach specific sports activities.
Education- some people are not aware of the benefits of sport.
Time/ Work commitments- Work commitments can get in the way of finding enough time for sport. Travel time to and from work may reduce time available for participating. Family commitments may reduce the time available for parents to participate.

Year 10 Unit 7 -Programming

Lesson 1

List the main data types used in programming.

Integer, real, Boolean, character and string

Declare and use constants and variables.

number = 25, name = "Dave", output = False

Use input, output and assignment statements

name = input("Enter name: "), number = int(input("Enter number: "))

Use arithmetic operators including MOD and DIV

15div2 = 15//2 = 7, 15mod2 = 15%2 = 1 (7 remainder 1)

Use string handling and conversion functions

firstname = "Rose", surname = "Chan", fullname = firstname + " " + surname

Lesson 2

Use selection and nested selection statements

```
if average >= 80 then
        print("Distinction")
else
        print("Pass")
endif
```

```
if average >= 80 then
        print("Distinction")
elseif average >= 60 then
        print("Merit")
elseif average >= 40
        print("Pass")
else
        print("Fail")
endif
```

```
if member == "child" then
        if day == "Saturday" then
                swimPrice = 2.00
        else
                swimPrice = 2.50
        endif
else
        swimPrice = 4.00
endif
```

Use NOT, AND and OR when creating Boolean expressions

if (mark < 0) OR (mark > 100) then

Use random number generation

```
import random
die = random.randint(0, 100)
print(die)
```

Lesson 3

Understand and use iteration in an algorithm.

Iteration means repetition of a section of code

There are three types of iteration statement in most languages such as Visual Basic, Java, and C#

for ... next

while ... endwhile

Keywords

if
Starts a conditional block

elif
else if, adds additional conditions

else
defines the block if no conditions are met

for
starts a for loop

while
starts a while loop

True
Boolean value true

False
Boolean value false

and
logical AND

or
logical OR

not
logical NOT

Iteration
Repeating the same instructions again and again.

do ... until
Some languages, such as Python, do not have the
do ... until statement

Write algorithms in pseudocode involving sequence, selection and iteration

for loop	while loop	repeat until (do until)
total = 0 for i = 1 to 7 dailyTemperature = input() total = total + dailyTemperature next i averageWeeksTemp = total / 7 print(averageWeeksTemp)	password = input("Please enter password: ") while password != "jd8UpP2+d" password = input("Invalid password – try again") endwhile print("Correct password")	password = "" do password = input("Invalid password – try again") until password == "jd8UpP2+d" print("Correct password")

Algorithm
A set of instructions that solve a problem or achieve a goal.

Lesson 4

Use one- and two-dimensional arrays in the design of solutions to simple problems

1 dimensional array	2 dimensional array
for i = 0 to 99 userNames[i] = input("Enter next name: ") next i for i = 0 to 99 print(UserName[i]) next i	for s = 0 to 2 studentTotal = 0 for m = 0 to 4 studentTotal = studentTotal + mark[s] [m] next m print(studentTotal) next s

Lesson 5

Describe the concept of subroutines.

Subroutines allow code that you intend to use a number of time to be grouped together under one name.

- Both functions and procedures are subroutines
- Values can be passed to both procedures and functions
- Functions will return a value after processing has taken place

Show how to write simple procedures and functions.

Procedure	Function

def answerYorN():
  answer = ""
  while answer !="N" or answer !="Y":
  answer = input("Enter Y or N: ")
  if answer == "Y" or answer == "N":
  print(answer)
####################################
answerYorN()
	def answerYorN():
	  answer = ""
	  while answer !="N" or answer !="Y":
	  answer = input("Enter Y or N: ")
	  if answer == "Y" or answer == "N":
	  return answer
	####################################
	response = answerYorN()
	print(response)

Understand and use parameters to pass data to procedures and functions

function averageScore(totalScore, numScores)
  avg = totalScore / numScores
  return avg
endfunction
	To call the function:
	total = int(input("Enter total score: "))
	n = int(input("Enter number of scores: "))
	print(averageScore(total, n))

Explain the advantages of using subroutines in programs

- Each subroutine can be tested separately to make sure it works correctly
- Many programmers can work on a large program at the same time, cutting down development time
- Subroutines can be re-used in other programs
- Subroutines can be stored in a subroutine library and used in different programs if required
- Program maintenance is easier – if requirements change then just the affected subroutines need to be modified

Lesson 6

Understand and use basic file handling operations: open, read, write, close

```
def addStudents():
    marksFile = open("marks.txt", "a")
    print("This program lets you write names and marks to marks.txt")
    print("If the file does not exist, it will be created")
    moreNames = True
    while moreNames:
        name = input("Enter student name: ")
        mark = input("Enter student mark: ")
        marksFile.write(name + "," + mark + "\n")
        if input("Add another student (y/n)? ") == "n":
            moreNames = False
    return marksFile
    marksFile.close()

names =  addStudents()
print(names)
```

Lesson 7

Use SQL (Structured Query Language) statements to search for data:

SELECT … (list the fields to be displayed)
FROM … (specify the table name)
WHERE … (list the search criteria)

Formulate criteria involving AND, OR and LIKE

```
SELECT *
FROM members
WHERE Surname LIKE 'H*'
```

Use SELECT, FROM, WHERE, ORDER BY statements

```
SELECT *
FROM members
WHERE Town = 'Colchester' OR Town = 'IPSWICH'
Order by FirstName
```

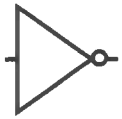
Year 10 Unit 8 - Logic and gates

Lesson 1

Construct truth tables for the following logic gates:

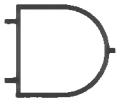
NOT GATE

IN	OUT
0	1
1	0



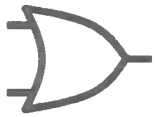
AND GATE

IN 1	IN 2	OUT
0	0	0
0	1	0
1	0	0
1	1	1



OR GATE

IN 1	IN 2	OUT
0	0	0
0	1	1
1	0	1
1	1	1



Lesson 2

Describe defensive design considerations:

- **Input validation** - Validation cannot ensure that the user has not entered a wrong value, or made a spelling mistake in a name. It can only ensure that the data is reasonable and conforms to a set of rules
- **Anticipating misuse** - Three tries and you're out!
- **Authentication** - Authentication routines are used to make sure a person is who they claim to be

Understand how to make maintainable programs including:

- The use of sub programs - functions and procedures
- Naming conventions - Using appropriate naming conventions
- Indentation - Indentation makes it possible to easily see which lines of code are part of different structures
- Commenting - Comments in code help other programmers to understand your code

Lesson 3

Understand the purpose of testing including:

- **Iterative testing** - tests modules and parts of a program as the program is developed
- **Final/terminal testing** - tests the whole program at the end of production
- **Identify syntax and logic errors** - A syntax error is where the programming code written doesn't conform to the rules/grammar of the language. A logic error is where the program compiles/runs but it doesn't do what the

Keywords

Boolean logic
True or False, 1 or 0, Yes or No. It is binary.

NOT gate
Output will be the opposite of the input.

AND gate
Only when both inputs are a 1 will the output be a 1.

OR gate
When either of the two inputs is a 1 the out will be a 1.

Range check
A number or date is within a sensible/allowed range

Type check
Data is of the right type, such as integer, letter or text

Length check
Text entered is not too long or too short – for example, a password is between 8 and 15 characters

Presence check
Checks that data has been entered, i.e. the field has not been left blank

	programmer intended **Select and use suitable test data including:** • **Normal** - A value that is within the valid range. • **Boundary** - Checks lowest or highest valid data. • **Invalid -** Checks data of the correct type but outside the valid range. • **Erroneous** - Checks data of the wrong type.	**Format check** Checks that the format of, for example, a postcode or email address is correct
Lesson 4	Describe the characteristics and purpose of different levels of programming language, including: • **Low-level languages** - In machine code all instructions are written in binary. A typical instruction may look like this - 01010011000. Assembly language allows a programmer to create programs more easily than writing in machine code. Each assembly language instruction maps directly to machine code. • **High-level languages** - High-level languages generally have statements that look a bit like English or Maths. This makes these languages easier to learn and understand **Understand the purpose of translators** - To translate high level language into machine code that a processor can understand. **Describe the characteristics of a compiler and interpreter** A compiler translates a high-level language into machine code. The object code can be saved a storage drive and run whenever required. An interpreter is another type of program that translates a high-level language into machine code. Unlike a compiler, no object code is produced. It translates each line of code and executes it immediately. If it reaches a line with a syntax error, it stops and displays an error message	
Lesson 5	**Understand the use of an Integrated Development Environment (IDE) to develop programs, including the following:** They have a number of tools and features that help programmers when they are programming **Editors** - Enables a user to edit code. Will often have line numbers, breakpoints, code folding and variable watching. **Error diagnostics** - Error diagnostics help a programmer to find where they have made a mistake. Errors are identified along with the line number that they occur on. The code may be underlined or highlighted to show the error **Run-time environment** - The run-time environment allows a programmer to test their program while it is running. If the program crashes the run-time environment can see what happened and give useful information to the programmer.	