GEOGRAPHY Year 10: Curriculum Intent

The geography department aims to provide year 10 students with a challenging and diverse curriculum that not only meets the needs of the AQA GCSE curriculum, but also develops a wide range of skills to assist further studies at A-level as well as employability. Year 10 start the year studying 'The Challenge of Natural Hazards'. Through the study of tectonic and weather hazards, students understand the physical processes responsible for volcanoes and earthquakes (tectonic) as well as tropical storms (weather). Students are encouraged to consider why much of this unit takes a global perspective in terms of the position of the U.K in relation to tectonic plates as well as the key factor influencing climate, latitude. The local context of extreme weather in the U.K is then analysed through exemplification of contrasting extreme events in our recent history. This concludes with the realisation that our weather is increasingly becoming more extreme with scientific research suggesting climate change as the key factor. Paper 1 is concluded with an in depth study the evidence for climate change and its impacts as well as a decision-making exercise on the sustainability of possible mitigation and adaptation strategies. Students conclude year 10 by commencing their work on paper 2, human geography, with the unit 'Urban Issues and Challenges'. With an ever-increasing percentage of the world's population living in cities it is important for students to analyse the opportunities and challenges this creates through case studies of urbanisation in Mumbai as well as urban change in Manchester. Finally, opportunities for fieldwork are provided through a human geography study of the regeneration of Salford Quays as well as a physical geography study of changing river characteristics in Edale. Throughout year 10 students are encouraged to critically evaluate the evidence provided as well as make links and connections between physical and human geography topics which builds the foundation for the synoptic paper 3 in year 11.

Year 10 Essential Knowledge Summary

Schemata 1: Tectonic Hazards

Composite knowledge: Pupils will gain an understanding of how the structure of the earth leads to earthquake and volcanic activity. The severity of impacts and effectiveness of management are greatly impacted by the economic status of the affected area. Exemplification is provided through a contrasting study of earthquakes in Chile and Nepal.

Component knowledge:

Foundational knowledge

Declarative knowledge:

- The crust of the earth is broken into sections known as tectonic plates.
- Tectonic plates move due to heat from the inner core.
- Where tectonic plates meet (margin / boundary) earthquakes and / or volcanoes may occur.
- Tectonic hazards can have primary and secondary impacts
- Responses to tectonic hazards can be immediate and long term.

Procedural knowledge:

- How the structure of the earth is known thanks to seismologists analysing earthquake data.
- Volcanologists rely on effective monitoring to make predictions of volcanic eruptions.
- Methods of quantifying tectonic hazard severity.
- Extended writing (PEDaL paragraphs)

Upper Hierarchical knowledge:

- Understanding exceptions to the normal distribution of earthquake and volcanic activity.
- Analysing the influence of economic development on impacts and responses to tectonic hazards.
- Evaluating a range of strategies to monitor, predict, plan and protect.

Schemata 2: Weather Hazards

Composite knowledge: Pupils will gain an understanding of how global atmospheric circulation can lead to atmospheric hazards. Tropical storms are studied in terms of distribution, structure, impacts and management with exemplification provided through a study of Typhoon Haiyan. Patterns of extreme weather in the U.K are studied to consider whether the weather of the U.K is becoming more extreme.

Component knowledge:

Foundational knowledge

Declarative knowledge:

- The curvature of the earth leads to differential heating which results in the movement of air.
- The equator receives high levels of solar energy causing high levels of evaporation resulting in tropical storms.
- Hazards of tropical storms are strong winds, heavy rain and storm surges.
- Impacts of tropical storms can be primary or secondary.
- Responses to tropical storms can be immediate or long term.
- Extreme weather in the U.K is weather that is out of the ordinary and / or has severe social / economic impacts.

Procedural knowledge:

- Effective satellite monitoring can make accurate predictions of tropical storm tracks and therefore prior warning allowing for evacuation.
- Analysing patterns of extreme weather in the U.K allows for predictions to be made for the future.
- Extended writing (PEDaL paragraphs)

Upper Hierarchical knowledge:

- The importance of collaboration between nations to reduce the impact of tropical storms.
- Analysing the influence of economic development in impacts and responses to weather hazards.

Schemata 3: Climate Change

Composite knowledge: Pupils will gain an understanding of how global temperatures have changed during the quaternary period. Natural and human factors on climate are investigated considering the impacts of these changes on countries at varying levels of economic development. Methods of mitigation and adaptation are critically analysed.

Component knowledge:

Foundational knowledge

Declarative knowledge:

- Over the last 400 000 years Earth has gone through a series of glacial and interglacial periods.
- Solar output, Milankovitch cycles and volcanic activity are all natural influences.
- Fossil fuels, deforestation, transportation and industry are all human factors influencing climate.
- Since the industrial revolution global temperatures have risen significantly with scientific research suggesting human influences being largely to blame.
- A range of mitigation strategies exist to limit further warming.
- Adaptation is necessary due to many mitigation strategies proving ineffective.

Procedural knowledge:

- How global temperature records have been kept since 1880.
- How proxy data can be used to track previous temperature records. E.g. Ice cores and tree rings.
- Extended writing (PEDaL paragraphs)

Upper Hierarchical knowledge:

- The success of mitigation relies on effective collaboration between global policy makers.
- Impacts to climate change and effectiveness of adaptation will vary between countries largely due to economic development.

Schemata 4: The Urban World

Composite knowledge: Pupils will gain an understanding of the global move to cities known as urbanisation. Patterns of urbanisation are studied through the lens of economic development. Opportunities and challenges of rapid urbanisation are studied through the case study of Mumbai in India. Strategies to improve the quality of life for the urban poor in Mumbai are analysed through the example of the SRA buildings in Dharavi, Mumbai.

Component knowledge:

Foundational knowledge

Declarative knowledge:

- Urbanisation is defined as an increasing percentage of a population living in towns and cities.
- Urbanisation rates vary between countries at varying levels of economic development. Currently Newly Emerging Economies such as India are rapidly urbanising.
- Rapid urbanisation in Mumbai is caused by high levels of natural increase and high levels of rural to urban migration.
- Rapid urbanisation in Mumbai provides socio-economic advantages to residents often not available in rural areas of India.

Schemata 5: Urban Change in the U.K

Composite knowledge: Pupils will gain an understanding of the changes experienced by urban areas in the U.K. Through a case study of Manchester students will investigate the industrialisation, de-industrialisation and regeneration phases in the city's recent history. The example of Salford Quays gives students the opportunity to analyse the social, economic and environmental impacts of these changes over time. Critical evaluation of urban regeneration is provided through an analysis of issues surrounding social deprivation.

Component knowledge:

Foundational knowledge

Declarative knowledge:

- The population of the U.K is unevenly distributed with rural spaces sparsely populated and urban areas densely populated. This distribution is largely due to physical factors.
- The population of Manchester has varied over time due to economic opportunities available in the city.
- Urban regeneration has recently caused a rise in population.
- Salford Quays is a mixed land use regeneration project in inner city Manchester.

● Rapid urbanisation in Mumbai creates a range of social, economic and environmental challenges for residents and authorities. ● Government officials are attempting to improve the quality of life for the rural poor in Mumbai through the development of Slum Rehabilitation Authority (SRA) apartments. Procedural knowledge: ● Analysis of urbanisation rates over time. ● How informal employment influences service provision in urban areas of NEEs. ● How service provision in NEEs influences environmental conditions and quality of life for residents. ● Extended writing (PEDaL paragraphs) **Upper Hierarchical knowledge** ● How patterns of urbanisation link to economic activity. ● Community spirit in the face of adversity. ● Critical evaluation of efforts to improve the quality of life for the urban poor in Mumbai.	● Urban regeneration has created a range of social, economic and environmental opportunities and challenges. ● Sustainable urban areas rely on careful consideration of social, economic and environmental issues both now and in the future. Procedural knowledge: ● Analysis of population data over time. ● Understanding how economic factors influence land use in urban zones (The Burgess Model) ● How sustainable urban design relies on a wide range of stakeholders being involved in the decision-making process. ● Extended writing (PEDaL paragraphs) **Upper Hierarchical knowledge** ● How issues of globalisation have impacted the land use of inner-city Manchester. ● How urban inequalities exist in income, housing and education.

<u>Year 10 Final Composite Knowledge End Point</u>

- The structure of the earth has the potential to cause natural hazards.
- The movement of air around our planet has the potential to cause natural hazards.
- Impacts of natural hazards are largely influenced by economic development.
- Responses to natural hazards are largely influences by economic development.
- The recent warming of our planet is largely to blame on our use of fossil fuels.
- Both mitigation and adaptation to climate change will be necessary in the future.
- Over time the percentage of people living in urban areas has increased and will continue to do so.
- Rapid urbanisation in NEEs can create both opportunities and challenges.
- Urban change in Manchester has created a range of opportunities and challenges.
- Urban sustainability relies on effective consideration of social, economic and environmental factors both now and in the future.