

**Paper 1 – Living with the Physical Environment and Fieldwork**  
1hr 30 minutes

## Natural hazards

Key idea	Specification content
Natural hazards pose major risks to people and property.	Definition of a natural hazard. Types of natural hazard. Factors affecting hazard risk.

## Tectonic hazards

Key idea	Specification content
Earthquakes and volcanic eruptions are the result of physical processes.	Plate tectonics theory. Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins. Physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.
The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth.	Primary and secondary effects of a tectonic hazard. Immediate and long-term responses to a tectonic hazard. Use <b>named examples</b> to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth.
Management can reduce the effects of a tectonic hazard.	Reasons why people continue to live in areas at risk from a tectonic hazard. How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.

## Weather hazards

Key idea	Specification content
Global atmospheric circulation helps to determine patterns of weather and climate.	General atmospheric circulation model: pressure belts and surface winds.
Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.	Global distribution of tropical storms (hurricanes, cyclones, typhoons). An understanding of the relationship between tropical storms and general atmospheric circulation. Causes of tropical storms and the sequence of their formation and development. The structure and features of a tropical storm. How climate change might affect the distribution, frequency and intensity of tropical storms.
Tropical storms have significant effects on people and the environment.	Primary and secondary effects of tropical storms. Immediate and long-term responses to tropical storms. Use a <b>named example</b> of a tropical storm to show its effects and responses. How monitoring, prediction, protection and planning can reduce the effects of tropical storms.
The UK is affected by a number of weather hazards.	An overview of types of weather hazard experienced in the UK.
Extreme weather events in the UK have impacts on human activity.	An <b>example</b> of a recent extreme weather event in the UK to illustrate: <ul style="list-style-type: none"> <li>• causes</li> <li>• social, economic and environmental impacts</li> <li>• how management strategies can reduce risk.</li> </ul> Evidence that weather is becoming more extreme in the UK.

## Climate change

Key idea	Specification content
Climate change is the result of natural and human factors, and has a range of effects.	<p>Evidence for climate change from the beginning of the Quaternary period to the present day.</p> <p>Possible causes of climate change:</p> <ul style="list-style-type: none"> <li>• natural factors – orbital changes, volcanic activity and solar output</li> <li>• human factors – use of fossil fuels, agriculture and deforestation.</li> </ul> <p>Overview of the effects of climate change on people and the environment.</p>
Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change).	<p>Managing climate change:</p> <ul style="list-style-type: none"> <li>• mitigation – alternative energy production, carbon capture, planting trees, international agreements</li> <li>• adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels.</li> </ul>

## Ecosystems

Key idea	Specification content
Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components.	<p>An <b>example</b> of a small scale UK ecosystem to illustrate the concept of interrelationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycling.</p> <p>The balance between components. The impact on the ecosystem of changing one component.</p> <p>An overview of the distribution and characteristics of large scale natural global ecosystems.</p>

## Tropical rainforests

Key idea	Specification content
Tropical rainforest ecosystems have a range of distinctive characteristics.	<p>The physical characteristics of a tropical rainforest.</p> <p>The interdependence of climate, water, soils, plants, animals and people.</p> <p>How plants and animals adapt to the physical conditions.</p> <p>Issues related to biodiversity.</p>
Deforestation has economic and environmental impacts.	<p>Changing rates of deforestation.</p> <p>A <b>case study</b> of a tropical rainforest to illustrate:</p> <ul style="list-style-type: none"> <li>• causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth</li> <li>• impacts of deforestation – economic development, soil erosion, contribution to climate change.</li> </ul>
Tropical rainforests need to be managed to be sustainable.	<p>Value of tropical rainforests to people and the environment.</p> <p>Strategies used to manage the rainforest sustainably – selective logging and replanting, conservation and education, ecotourism and international agreements about the use of tropical hardwoods, debt reduction.</p>

## Hot deserts

Key idea	Specification content
Hot desert ecosystems have a range of distinctive characteristics.	<p>The physical characteristics of a hot desert.</p> <p>The interdependence of climate, water, soils, plants, animals and people.</p> <p>How plants and animals adapt to the physical conditions.</p> <p>Issues related to biodiversity.</p>
Development of hot desert environments creates opportunities and challenges.	<p>A <b>case study</b> of a hot desert to illustrate:</p> <ul style="list-style-type: none"><li>• development opportunities in hot desert environments: mineral extraction, energy, farming, tourism</li><li>• challenges of developing hot desert environments: extreme temperatures, water supply, inaccessibility.</li></ul>
Areas on the fringe of hot deserts are at risk of desertification.	<p>Causes of desertification – climate change, population growth, removal of fuel wood, overgrazing, over-cultivation and soil erosion.</p> <p>Strategies used to reduce the risk of desertification – water and soil management, tree planting and use of appropriate technology.</p>

## Paper 2 – Challenges in the Human Environment

### 1hr 30 minutes

### Section A: Urban issues and challenges

In this section, students are required to study all the themes.

Key idea	Specification content
A growing percentage of the world's population lives in urban areas.	<p>The global pattern of urban change.</p> <p>Urban trends in different parts of the world including HICs and LICs.</p> <p>Factors affecting the rate of urbanisation – migration (push-pull theory), natural increase.</p> <p>The emergence of megacities.</p>
Urban growth creates opportunities and challenges for cities in LICs and NEEs.	<p>A <b>case study</b> of a major city in an LIC or NEE to illustrate:</p> <ul style="list-style-type: none"> <li>• the location and importance of the city, regionally, nationally and internationally</li> <li>• causes of growth: natural increase and migration</li> <li>• how urban growth has created opportunities: <ul style="list-style-type: none"> <li>◦ social: access to services – health and education; access to resources – water supply, energy</li> <li>◦ economic: how urban industrial areas can be a stimulus for economic development</li> </ul> </li> <li>• how urban growth has created challenges: <ul style="list-style-type: none"> <li>◦ managing urban growth – slums, squatter settlements</li> <li>◦ providing clean water, sanitation systems and energy</li> <li>◦ providing access to services – health and education</li> <li>◦ reducing unemployment and crime</li> <li>◦ managing environmental issues – waste disposal, air and water pollution, traffic congestion.</li> </ul> </li> </ul> <p>An <b>example</b> of how urban planning is improving the quality of life for the urban poor.</p>
Urban change in cities in the UK leads to a variety of social, economic and environmental opportunities and challenges.	<p>Overview of the distribution of population and the major cities in the UK.</p> <p>A <b>case study</b> of a major city in the UK to illustrate:</p> <ul style="list-style-type: none"> <li>• the location and importance of the city in the UK and the wider world</li> <li>• impacts of national and international migration on the growth and character of the city</li> <li>• how urban change has created opportunities: <ul style="list-style-type: none"> <li>◦ social and economic: cultural mix, recreation and entertainment, employment, integrated transport systems</li> <li>◦ environmental: urban greening</li> </ul> </li> <li>• how urban change has created challenges: <ul style="list-style-type: none"> <li>◦ social and economic: urban deprivation, inequalities in housing, education, health and employment</li> <li>◦ environmental: dereliction, building on brownfield and greenfield sites, waste disposal</li> <li>◦ the impact of urban sprawl on the rural-urban fringe, and the growth of commuter settlements.</li> </ul> </li> </ul> <p>An <b>example</b> of an urban regeneration project to show:</p> <ul style="list-style-type: none"> <li>• reasons why the area needed regeneration</li> <li>• the main features of the project.</li> </ul>
Urban sustainability requires management of resources and transport.	<p>Features of sustainable urban living:</p> <ul style="list-style-type: none"> <li>• water and energy conservation</li> <li>• waste recycling</li> <li>• creating green space.</li> </ul> <p>How urban transport strategies are used to reduce traffic congestion.</p>

## Section B: The changing economic world

In this section, students are required to study all the themes.

Key idea	Specification content
<p>There are global variations in economic development and quality of life.</p>	<p>Different ways of classifying parts of the world according to their level of economic development and quality of life.</p> <p>Different economic and social measures of development: gross national income (GNI) per head, birth and death rates, infant mortality, life expectancy, people per doctor, literacy rates, access to safe water, Human Development Index (HDI).</p> <p>Limitations of economic and social measures.</p> <p>Link between stages of the Demographic Transition Model and the level of development.</p> <p>Causes of uneven development: physical, economic and historical.</p> <p>Consequences of uneven development: disparities in wealth and health, international migration.</p>
<p>Various strategies exist for reducing the global development gap.</p>	<p>An overview of the strategies used to reduce the development gap: investment, industrial development and tourism, aid, using intermediate technology, fairtrade, debt relief, microfinance loans.</p> <p>An <b>example</b> of how the growth of tourism in an LIC or NEE helps to reduce the development gap.</p>
<p>Some LICs and NEEs are experiencing rapid economic development which leads to significant social, environmental and cultural change.</p>	<p>A <b>case study</b> of one LIC or NEE to illustrate:</p> <ul style="list-style-type: none"> <li>• the location and importance of the country, regionally and globally</li> <li>• the wider political, social, cultural and environmental context within which the country is placed</li> <li>• the changing industrial structure. The balance between different sectors of the economy. How manufacturing industry can stimulate economic development</li> <li>• the role of transnational corporations (TNCs) in relation to industrial development. Advantages and disadvantages of TNC(s) to the host country</li> <li>• the changing political and trading relationships with the wider world</li> <li>• international aid: types of aid, impacts of aid on the receiving country</li> <li>• the environmental impacts of economic development</li> <li>• the effects of economic development on quality of life for the population.</li> </ul>
<p>Major changes in the economy of the UK have affected, and will continue to affect, employment patterns and regional growth.</p>	<p>Economic futures in the UK:</p> <ul style="list-style-type: none"> <li>• causes of economic change: de-industrialisation and decline of traditional industrial base, globalisation and government policies</li> <li>• moving towards a post-industrial economy: development of information technology, service industries, finance, research, science and business parks</li> <li>• impacts of industry on the physical environment. An <b>example</b> of how modern industrial development can be more environmentally sustainable</li> <li>• social and economic changes in the rural landscape in one area of population growth and one area of population decline</li> <li>• improvements and new developments in road and rail infrastructure, port and airport capacity</li> <li>• the north-south divide. Strategies used in an attempt to resolve regional differences</li> <li>• the place of the UK in the wider world. Links through trade, culture, transport, and electronic communication. Economic and political links: the European Union (EU) and Commonwealth.</li> </ul>