

PAPER 1 - Living with the physical environment

Section A: The challenges of natural hazards

Natural Hazards

Key Idea: Natural hazards pose major risks to people and property

I AM ABLE TO...	Y	N
Write a definition of a natural hazard.		
Describe types of natural hazards.		
Describe factors affecting hazard risk.		

Tectonic Hazards

Key Idea: Earthquakes and volcanic eruptions are the result of physical processes

I AM ABLE TO...	Y	N
Explain plate tectonics theory.		
Describe the global distribution of earthquakes and volcanic eruptions and their relationship to plate margins.		
Explain the physical processes taking place at different types of plate margin (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.		

Key Idea: The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth.

I AM ABLE TO...	Y	N
Identify and describe primary and secondary effects of a tectonic hazard.		
Identify and describe the immediate and long-term responses to a tectonic hazard.		
Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth.		

Key Idea: Management can reduce the effects of a tectonic hazard.

I AM ABLE TO...	Y	N
Explain the reasons why people continue to live in areas at risk from a tectonic hazard.		
Explain how monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.		

Weather Hazards

Key Idea: Global atmospheric circulation helps to determine patterns of weather and climate.

I AM ABLE TO...	Y	N
General atmospheric circulation model: pressure belts and surface winds.		

Key Idea: Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.

I AM ABLE TO...	Y	N
Describe and explain the global distribution of tropical storms (hurricanes, cyclones, typhoons).		
Show that I can understand the relationship between tropical storms and general atmospheric circulation by linking them together.		
Describe and explain the causes of tropical storms and the sequence of their formation and development.		
Draw and explain the structure and features of a tropical storm.		
Explain how climate change might affect the distribution, frequency and intensity of tropical storms.		

Key Idea: Tropical storms have significant effects on people and the environment.

I AM ABLE TO...	Y	N
Identify and describe primary and secondary effects of tropical storms.		
Identify and describe the immediate and long-term responses to tropical storms.		
Use a named example of a tropical storm to show its effects and responses.		
Explain how monitoring, prediction, protection and planning can reduce the effects of tropical storms.		

Key Idea: The UK is affected by a number of weather hazards.

I AM ABLE TO...	Y	N
Describe types of weather hazard experienced in the UK.		

Key Idea: Extreme weather events in the UK have impacts on human activity.

I AM ABLE TO...	Y	N
Use an example of a recent extreme weather event in the UK to illustrate:		
•• causes		
•• describe and explain the social, economic and environmental impacts		
•• explain how management strategies can reduce risk.		
Evidence that weather is becoming more extreme in the UK.		

Climate Change

Key Idea: Climate change is the result of natural and human factors, and has a range of effects.

I AM ABLE TO...	Y	N
Describe the evidence for climate change from the beginning of the Quaternary period to the present day.		
Explain the possible causes of climate change:		
•• natural factors - orbital changes, volcanic activity and solar output		
•• human factors - use of fossil fuels, agriculture and deforestation.		
Give an overview of the effects of climate change on people and the environment.		

Key Idea: Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change).

I AM ABLE TO...	Y	N
Explain how to manage climate change which includes:		
•• mitigation - alternative energy production, carbon capture, planting trees, international agreements		
•• adaptation - change in agricultural systems, managing water supply, reducing risk from rising sea levels.		

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Section B: The living world

Ecosystems

Key idea: Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components.

I AM ABLE TO...	Y	N
Use an example 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.		
Explain the balance between components. The impact on the ecosystem of changing one component.		
Give an overview of the distribution and characteristics of large scale natural global ecosystems.		

Tropical rainforests

Key idea: Tropical rainforest ecosystems have a range of distinctive characteristics.

I AM ABLE TO...	Y	N
Describe the physical characteristics of a tropical rainforest.		
Explain the interdependence of climate, water, soils, plants, animals and people.		
Describe how plants and animals adapt to the physical conditions.		
Explain the issues related to biodiversity.		

Key idea: Deforestation has economic and environmental impacts.

I AM ABLE TO...	Y	N
Describe and explain the changing rates of deforestation.		
Use a case study of a tropical rainforest to illustrate: •• causes of deforestation - subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth •• impacts of deforestation - economic development, soil erosion, contribution to climate change.		

Key idea: Tropical rainforests need to be managed to be sustainable.

I AM ABLE TO...	Y	N
Explain the value of tropical rainforests to people and the environment.		
Explain the 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.		

Hot deserts

Key idea: Hot desert ecosystems have a range of distinctive characteristics.

I AM ABLE TO...	Y	N
Explain the physical characteristics of a hot desert.		
Explain the interdependence of climate, water, soils, plants, animals and people.		
Explain how plants and animals adapt to the physical conditions.		
Explain the issues related to biodiversity.		

Key idea: Development of hot desert environments creates opportunities and challenges.

I AM ABLE TO...	Y	N
<p>Use a case study of a hot desert to illustrate:</p> <ul style="list-style-type: none"> •• development opportunities in hot desert environments: mineral extraction, energy, farming, tourism •• challenges of developing hot desert environments: extreme temperatures, water supply, inaccessibility. 		

Key idea: Areas on the fringe of hot deserts are at risk of desertification.

I AM ABLE TO...	Y	N
Explain the causes of desertification - climate change, population growth, removal of fuel wood, overgrazing, over-cultivation and soil erosion.		
Describe and explain the strategies used to reduce the risk of desertification - water and soil management, tree planting and use of appropriate technology.		

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Section C: Physical landscapes in the UK

UK physical landscapes

Key idea: The UK has a range of diverse landscapes.

I AM ABLE TO...	Y	N
Give an overview of the location of major upland/lowland areas and river systems.		

Coastal landscapes in the UK

Key idea: The coast is shaped by a number of physical processes.

I AM ABLE TO...	Y	N
Draw and list wave types and characteristics.		
I can explain, describe and identify Coastal processes of: <ul style="list-style-type: none"> •• weathering processes - mechanical, chemical •• mass movement - sliding, slumping and rock falls •• erosion - hydraulic power, abrasion and attrition •• transportation - longshore drift •• deposition - why sediment is deposited in coastal areas. 		

Key idea: Distinctive coastal landforms are the result of rock type, structure and physical processes.

I AM ABLE TO...	Y	N
Explain how geological structure and rock type influence coastal forms.		
Describe the characteristics and draw and explain formation of landforms resulting from erosion - headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.		
Describe the characteristics and draw and explain the formation of landforms resulting from deposition - beaches, sand dunes, spits and bars.		
Use an example of a section of coastline in the UK to identify its major landforms of erosion and deposition.		

Key idea: Different management strategies can be used to protect coastlines from the effects of physical processes.

I AM ABLE TO...	Y	N
Describe, identify and explain the costs and benefits of the following management strategies: <ul style="list-style-type: none"> •• hard engineering - sea walls, rock armour, gabions and groynes •• soft engineering - beach nourishment and reprofiling, dune regeneration •• managed retreat - coastal realignment. 		
Use an example of a coastal management scheme in the UK to show: <ul style="list-style-type: none"> •• the reasons for management •• the management strategy •• the resulting effects and conflicts. 		

River landscapes in the UK

Key idea: The shape of river valleys changes as rivers flow downstream.

I AM ABLE TO...	Y	N
Describe and explain the long profile and changing cross profile of a river and its valley.		
I can draw, describe and explain the following fluvial processes: <ul style="list-style-type: none"> •• erosion - hydraulic action, abrasion, attrition, solution, vertical and lateral erosion •• transportation - traction, saltation, suspension and solution •• deposition - why rivers deposit sediment. 		

Key idea: Distinctive fluvial landforms result from different physical processes.

I AM ABLE TO...	Y	N
Draw, describe and explain the characteristics and formation of landforms resulting from erosion - interlocking spurs, waterfalls and gorges.		
Draw, describe and explain the characteristics and formation of landforms resulting from erosion and deposition - meanders and ox-bow lakes.		
Draw, describe and explain the characteristics and formation of landforms resulting from deposition - levées, flood plains and estuaries.		
Use an example of a river valley in the UK to identify its major landforms of erosion and deposition.		

Key idea: Different management strategies can be used to protect river landscapes from the effects of flooding.

I AM ABLE TO...	Y	N
Explain how physical and human factors affect the flood risk - precipitation, geology, relief and land use.		
Draw, describe and interpret hydrographs to show the relationship between precipitation and discharge.		
Describe and explain the costs and benefits of the following management strategies: <ul style="list-style-type: none"> •• hard engineering - dams and reservoirs, straightening, embankments, flood relief channels •• soft engineering - flood warnings and preparation, flood plain zoning, planting trees and river restoration. 		
<p>Use an example of a flood management scheme in the UK to show:</p> <ul style="list-style-type: none"> •• why the scheme was required •• the management strategy •• the social, economic and environmental issues. 		

PAPER 2 - Challenges in the human environment

Section A: Urban issues and challenges

Key idea: A growing percentage of the world's population lives in urban areas.

I AM ABLE TO...	Y	N
Describe the global pattern of urban change.		
Understand the urban trends in different parts of the world including HICs and LICs.		
Explain the factors affecting the rate of urbanisation - migration (push-pull theory), natural increase.		
Describe and explain the emergence of megacities.		

Key idea: Urban growth creates opportunities and challenges for cities in LICs and NEEs.

I AM ABLE TO...	Y	N
<p>Use a case study of a major city in an LIC or NEE to illustrate:</p> <ul style="list-style-type: none"> •• the location and importance of the city, regionally, nationally and internationally •• causes of growth: natural increase and migration •• how urban growth has created opportunities: •• social: access to services - health and education; access to resources - water supply, energy •• economic: how urban industrial areas can be a stimulus for economic development •• how urban growth has created challenges: •• managing urban growth - slums, squatter settlements •• providing clean water, sanitation systems and energy •• providing access to services - health and education •• reducing unemployment and crime •• managing environmental issues - waste disposal, air and water pollution, traffic congestion. 		
Use an example of how urban planning is improving the quality of life for the urban poor.		

Key idea: Urban change in cities in the UK leads to a variety of social, economic and environmental opportunities and challenges.

I AM ABLE TO...	Y	N
Describe and give some reasons to explain the distribution of population and the major cities in the UK.		
<p>Use a case study of a major city in the UK to illustrate:</p> <ul style="list-style-type: none"> •• the location and importance of the city in the UK and the wider world •• impacts of national and international migration on the growth and character of the city •• how urban change has created opportunities: •• social and economic: cultural mix, recreation and entertainment, employment, integrated transport systems •• environmental: urban greening •• how urban change has created challenges: •• social and economic: urban deprivation, inequalities in housing, education, health and employment •• environmental: dereliction, building on brownfield and greenfield sites, waste disposal •• the impact of urban sprawl on the rural-urban fringe, and the growth of commuter settlements. 		
<p>Use an example of an urban regeneration project to show:</p> <ul style="list-style-type: none"> •• reasons why the area needed regeneration •• the main features of the project. 		

Key idea: Urban sustainability requires management of resources and transport.

I AM ABLE TO...	Y	N
<p>Describe the features of sustainable urban living:</p> <ul style="list-style-type: none"> •• water and energy conservation •• waste recycling •• creating green space. 		
Explain and evaluate how urban transport strategies are used to reduce traffic congestion.		

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Section B: The changing economic world

Key idea: There are global variations in economic development and quality of life.

I AM ABLE TO...	Y	N
Describe the different ways of classifying parts of the world according to their level of economic development and quality of life.		
I can define and describe the 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).		
I can explain the limitations of economic and social measures.		
Make links between stages of the Demographic Transition Model and the level of development.		
Explain the causes of uneven development: physical, economic and historical.		
Explain the consequences of uneven development: disparities in wealth and health, international migration.		

Key idea: Various strategies exist for reducing the global development gap.

I AM ABLE TO...	Y	N
Give 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.		
Use an example of how the growth of tourism in an LIC or NEE helps to reduce the development gap.		

Key idea: Some LICs and NEEs are experiencing rapid economic development which leads to significant social, environmental and cultural change.

I AM ABLE TO...	Y	N
<p>Use a case study of one LIC or NEE to illustrate:</p> <ul style="list-style-type: none"> •• the location and importance of the country, regionally and globally •• the wider political, social, cultural and environmental context within which the country is placed •• the changing industrial structure. The balance between different sectors of the economy. How manufacturing industry can stimulate economic development •• the role of transnational corporations (TNCs) in relation to industrial development. Advantages and disadvantages of TNC(s) to the host country •• the changing political and trading relationships with the wider World •• international aid: types of aid, impacts of aid on the receiving Country •• the environmental impacts of economic development •• the effects of economic development on quality of life for the population. 		

Key idea: Major changes in the economy of the UK have affected, and will continue to affect, employment patterns and regional growth.

I AM ABLE TO...	Y	N
<p>Economic futures in the UK:</p> <ul style="list-style-type: none"> •• causes of economic change: de-industrialisation and decline of traditional industrial base, globalisation and government policies •• moving towards a post-industrial economy: development of information technology, service industries, finance, research, science and business parks •• impacts of industry on the physical environment. An example of how modern industrial development can be more environmentally sustainable •• social and economic changes in the rural landscape in one area of population growth and one area of population decline •• improvements and new developments in road and rail infrastructure, port and airport capacity •• the north-south divide. Strategies used in an attempt to resolve regional differences •• 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. 		

PAPER 2 - Challenges in the human environment

Section C: The challenges of resource management

Resource Management

Key idea: Food, water and energy are fundamental to human development.

I AM ABLE TO...	Y	N
The significance of food, water and energy to economic and social well-being.		
An overview of global inequalities in the supply and consumption of resources.		

Key idea: The changing demand and provision of resources in the UK create opportunities and challenges.

I AM ABLE TO...	Y	N
Give an overview of resources in relation to the UK.		
Food:		
Describe the growing demand for high-value food exports from low income countries and all-year demand for seasonal food and organic produce		
Understand larger carbon footprints due to the increasing number of 'food miles' travelled, and moves towards local sourcing of food		
Explain the trend towards agribusiness.		
Water:		
Explain the changing demand for water		
Describe water quality and pollution management		
Match supply and demand - areas of deficit and surplus		
Understand the need for transfer to maintain supplies.		
Energy:		
Describe and explain the changing energy mix - reliance on fossil fuels, growing significance of renewables		
Describe why there are reduced domestic supplies of coal, gas and oil		
Describe and evaluate the economic and environmental issues associated with exploitation of energy sources.		

Food

Key idea: Demand for food resources is rising globally but supply can be insecure, which may lead to conflict.

I AM ABLE TO...	Y	N
Describe areas of surplus (security) and deficit (insecurity):		
Describe and explain global patterns of calorie intake and food supply		
Explain the reasons for increasing food consumption: economic development, rising population		
Explain the factors affecting food supply: climate, technology, pests and disease, water stress, conflict, poverty.		
Evaluate the impacts of food insecurity - famine, undernutrition, soil erosion, rising prices, social unrest.		

Key idea: Different strategies can be used to increase food supply.

I AM ABLE TO...	Y	N
Give an overview of strategies to increase food supply such as: irrigation, aeroponics and hydroponics, the new green revolution and use of biotechnology, appropriate technology		
Use an example of a large scale agricultural development to show how it has both advantages and disadvantages.		
Moving towards a sustainable resource future:		
Explain the potential for sustainable food supplies: organic farming, permaculture, urban farming initiatives, fish and meat from sustainable sources, seasonal food consumption, reduced waste and losses		
Use an example of a local scheme in an LIC or NEE to increase sustainable supplies of food.		