The Appleton School

AQA GEOGRAPHY GCSE

PAPER 1: LIVING WITH THE PHYSICAL ENVIRONMENT

GCSEPOD PLC CHECKLISTS 2024

Challenges in the physical environment: Paper 1: Personalised Learning Checklist

Section A: The challenge of natural hazards – You will answer all of the questions in Section A of the exam.

Section A: The challenge of natural hazards		
Key Idea	**Key Knowledge to understand**	**GCSEPOD Link**
	Natural Hazards	
Natural hazards pose major risks to people and property.	Define a natural hazard Type of hazard The factors affecting hazard risk	Natural Hazards
	Tectonic Hazards	
Earthquakes and volcanic eruptions are the result of physical processes.	How tectonic plates move - convection currents	Plate tectonic Theory
	Global distribution of earthquakes and volcanoes	Plate Boundaries
	Types of plate margin - constructive, destructive and conservative and how these lead to earthquakes and volcanic activity	Conservative and Constructive Destructive Earthquakes Volcanoes
The effects of, and responses to, a tectonic hazard vary between areas of contrasting levels of wealth.	Primary effects of a tectonic hazard	Nepal Effects Italy Effects
	secondary effects of a tectonic hazard	
	Immediate responses to a tectonic hazard	Nepal Responses Italy Responses Comparison
	long-term responses to a tectonic hazard	

Management can reduce the effects of a tectonic hazard.	Reasons why people live in areas at risk from a tectonic hazard	Living on plate boundaries
	Ways monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard	Volcanoes Earthquakes

Weather Hazards		
Global atmospheric circulation helps to determine patterns of weather and climate.	Global atmospheric circulation model, pressure belts and surface winds	Circulation Model
Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.	Global distribution of tropical storms (hurricanes, cyclones, typhoons) The relationship between tropical storms and general atmospheric circulation	What are tropical storms?
	Causes of tropical storms Sequence of formation and development The structure and features of a tropical storm	Formation and characteristics
	How climate change can affect the distribution, frequency and intensity of tropical storms.	What are tropical storms?
Tropical storms have significant effects on people and the environment.	Primary effects of a tropical storm	Short and long term impacts
	secondary effects of a tropical storm	Haiyan Effects
	Immediate responses to a tropical storm	Haiyan responses
	long-term responses to a tropical storm	
	Ways monitoring, prediction, protection and planning can reduce the risks from tropical storms	Management of Tropical storms
The UK is affected by a number of weather hazards.	Overview of types of weather hazard experienced in the UK	Weather hazards in UK
Extreme weather events in the UK have impacts on human activity.	Causes of an extreme weather event in the UK	Cumbria Flood 2009
	Social, economic and environmental impacts of an extreme weather event in the UK	Cumbria Flood effects

	How management strategies can reduce risk of an extreme weather event in the UK	Cumbria Floods Reponses
	Evidence that weather is becoming more extreme in the UK.	IS UK Extreme weather getting worse?

Climate Change		
Climate change is the result of natural and human factors, and has a range of effects.	Evidence for climate change from the Quaternary to present day	Evidence
	Possible causes of climate change: natural factors – orbital changes, volcanic activity and solar output.	Natural Causes
	Human causes of climate change e.g. use of fossil fuels, agriculture and deforestation	Human Causes
	Effects of climate change on people and the environment	Effects
Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change).	Managing climate change - mitigation - alternative energy production, carbon capture, afforestation and international agreements	Mitigation
	Managing climate change - adaptation - change in agricultural systems, managing water supply, reducing risk from rising sea levels	Adaptation

Section B: The living world – In the exam you only answer questions on Ecosystems, Tropical Rainforests and Hot deserts NOT COLD ENVIRONMENTS

Section B: The living world		
Ecosystems		
Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components.	Small scale ecosystem to show the concept of interrelationships within a natural system, an understanding of food chains and webs	Epping Forest 1 Epping Forest 2
	Understanding of producers, consumers, decomposers and nutrient cycling The balance between components in an ecosystem and the impact on the ecosystem of changing one component	Ecosystems balance
	Overview of the distribution and characteristics of large scale global ecosystems	Overview 1 Overview 2
Tropical Rainforests		
Tropical rainforest ecosystems have a range of distinctive characteristics.	The physical characteristics of tropical rainforests	Features
	The relationship between climate, water, soils, plants, animals and people.	
	How plants and animals adapt to the physical conditions	Adaptations
	Issues related to biodiversity	
Deforestation has economic and environmental impacts.	Changing rates of deforestation	deforestation
	Case Study - causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth	Amazon Features Deforestation
	Case Study - impacts of deforestation – economic development, soil erosion, contribution to climate change	Impact of deforestation
Tropical rainforests need to be managed to be sustainable.	The Value of tropical rainforests to people and the environment.	Value
	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.	Sustainable Management Sustainable Management in the Amazon

Hot Desert Environments		
Hot desert ecosystems have a range of distinctive characteristics.	The physical characteristics of tropical rainforests The relationship between climate, water, soils, plants, ls anima and people.	Physical Characteristics
	How plants and animals adapt to the physical conditions Issues related to biodiversity	Ecosystem
Development of hot desert environments creates opportunities and challenges.	Development opportunities in hot desert environments e.g. tourism, energy	USA Western Desert
	Challenges of developing hot desert environments e.g. water supply and inaccessibility	USA Challenges Water Supply issues
Areas on the fringe of hot deserts are at risk of desertification.	Causes of desertification – climate change, population grow h, removal of fuel wood, overgrazing, over-cultivation and soil erosion.	Causes of desertification
	Strategies used to reduce the risk of desertification – wate and soil management, tree planting and use of appropriate technology.	Strategies

Section C: Physical landscapes in the UK – In the exam you will answer questions on the physical landscape of the UK, Coastal landscapes and River landscapes. **You DO NOT answer questions on COLD ENVIRONMENTS.**

Section C: Physical landscapes in the UK		
The UK has a range of diverse landscapes.	An overview of the location of major upland/lowland areas and river systems.	Distribution of landforms
Coastal landscapes		
The coast is shaped by a number of physical processes.	Wave types and characteristics.	Waves
	Coastal processes: weathering processes – mechanical, chemical	Marine processes
	Coastal processes: mass movement – sliding, slumping and rock falls	Weathering and mass movement

	Coastal processes: erosion – hydraulic power, abrasion and attrition	Marine processes
	Coastal processes: transportation – longshore drift	Waves
Distinctive coastal landforms are the result of rock type, structure and physical processes.	How geological structure and rock type influence coastal forms.	Geology
	Characteristics and formation of landforms resulting from **erosion** – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.	Headlands and bays Cliffs and wave cut platforms Caves arches stacks stumps
	Characteristics and formation of landforms resulting from **deposition** – beaches, sand dunes, spits and bars.	Beaches Sand Dunes Spits Bars
	Using the **Dorset** coastline as an **example** of a section of coastline in the UK to identify its major landforms of erosion and deposition.	Dorset Coast features
Different management strategies can be used to protect coastlines from the effects of physical processes.	The costs and benefits of the hard engineering – sea walls, rock armour, gabions and groynes:	Rock Armour Sea walls Groynes
	The costs and benefits of soft engineering – beach nourishment and reprofiling, dune regeneration	Beach nourishment Beach profiling Dune
	The cost and benefits of managed retreat – coastal realignment.	Realignment
	An example of a coastal management scheme in the UK to show: the reasons for management the management strategy the resulting effects and conflicts.	Dorset Coast features Management
River Landscapes		
The shape of river valleys changes as rivers flow downstream.	The long profile and changing cross profile of a river and its valley.	Water cycle. Long profile
	Fluvial processes: **erosion** – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion **transportation** – traction, saltation, suspension and solution **deposition** – why rivers deposit sediment.	Fluvial processes
Distinctive fluvial landforms result	Characteristics and formation of landforms resulting from erosion – interlocking spurs, waterfalls and gorges.	Upper course

from different physical processes.	Characteristics and formation of landforms resulting from erosion and deposition – meanders and ox-bow lakes.	Meanders and Oxbow lakes
	Characteristics and formation of landforms resulting from deposition – levées, flood plains and estuaries.	Floodplains and levees Estuaries and deltas
	An **example** of a river valley in the UK to identify its major landforms of erosion and deposition.	River Tees Features Processes Human activity Management
Different management strategies can be used to protect river landscapes from the effects of flooding.	How physical and human factors affect the flood risk – precipitation, geology, relief and land use.	Physical Human
	The use of hydrographs to show the relationship between precipitation and discharge.	Hydrographs What is a hydrograph
	The costs and benefits of the following management strategies: **hard engineering** – dams and reservoirs, straightening, embankments, flood relief channels	Dams Straightening Embankments Flood channel
	soft engineering – flood warnings and preparation, flood plain zoning, planting trees and river restoration	Flood warning Zoning Trees River Restoration
	An **example** of a flood management scheme in the UK to show: 1.) why the scheme was required 2) the management strategy 3) The social, economic and environmental issues.	Cumbria Floods Reponses