Geography - Year 11 - Manifest

Paper 1 - Living with the Physical Environment

1 Hour 30 minutes

Content overview: Unit 1 – Living with the physical environment; Section A and C	R	A	G

3.1 Living with the physical environment

Section A: The challenge of natural hazards

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 **named examples** 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 **named example** 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 **example** of a recent extreme weather event in the UK to illustrate: ● causes ● social, economic and environmental impacts ● how management strategies can reduce risk. 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.	Evidence for climate change from the beginning of the Quaternary period to the present day. Possible causes of climate change:

	• natural factors – orbital changes, volcanic activity and solar output • human factors – use of fossil fuels, agriculture and deforestation. Overview of the effects of climate change on people and the environment.
Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change).	Managing climate change: • mitigation – alternative energy production, carbon capture, planting trees, international agreements • adaptation – change in agricultural systems, managing water supply, reducing risk from rising sea levels.

Section C: Physical landscapes in the UK

In this section, students are required to study UK physical landscapes and Coastal landscapes in the UK, River landscapes in the UK

UK physical landscapes

Key idea	Specification content
The UK has a range of diverse landscapes.	An overview of the location of major upland/lowland areas and river systems.

Coastal landscapes in the UK

Key idea	Specification content
The coast is shaped by a number of physical processes.	Wave types and characteristics. Coastal processes: • 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.
Distinctive coastal landforms are the result of rock type, structure and physical processes.	How geological structure and rock type influence coastal forms. Characteristics and formation of landforms resulting from erosion – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks. Characteristics and formation of landforms resulting from deposition – beaches, sand dunes, spits and bars. An **example** of a section of coastline in the UK to identify its major landforms of erosion and deposition.

Different management strategies can be used to protect coastlines from the effects of physical processes.	The costs and benefits of the following management strategies: ● hard engineering – sea walls, rock armour, gabions and groynes ● soft engineering – beach nourishment and reprofiling, dune regeneration ● managed retreat – coastal 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.

River landscapes in the UK

Key idea	Specification content
The shape of river valleys changes as rivers flow downstream.	The long profile and changing cross profile of a river and its valley. Fluvial processes: ● erosion – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion ● transportation – traction, saltation, suspension and solution ● deposition – why rivers deposit sediment.
Distinctive fluvial landforms result from different physical processes.	Characteristics and formation of landforms resulting from erosion – interlocking spurs, waterfalls and gorges. Characteristics and formation of landforms resulting from erosion and deposition – meanders and ox-bow lakes. Characteristics and formation of landforms resulting from deposition – levées, flood plains and estuaries. An **example** of a river valley in the UK to identify its major landforms of erosion and deposition.
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. The use of hydrographs to show the relationship between precipitation and discharge. The costs and benefits of the following management strategies: ● hard engineering – dams and reservoirs, straightening, embankments, flood relief channels

	● soft engineering – flood warnings and preparation, flood plain zoning, planting trees and river restoration. An **example** of a flood management scheme in the UK to show: ● why the scheme was required ● the management strategy ● the social, economic and environmental issues.			