

GEOGRAPHY GCSE

Revision

EDEXCEL B

Paper 2 Topic 4: UK's evolving physical landscape



Name:

Topic 4: UKs evolving physical landscape

You should know	R	A	G
Enquiry question: Why does the physical landscape of the UK vary from place to place?			
The role of geology, past tectonic and glacial processes (glacial erosion and deposition) in the development of upland (igneous and metamorphic rocks) and lowland (sedimentary rocks) landscapes.			
Characteristics and distribution of the UK's main rock types: sedimentary (chalk, carboniferous limestone, clay) igneous (granite), metamorphic (schists, slates).			
Why distinctive upland and lowland landscapes result from the interaction of physical processes: weathering and climatological, post-glacial river and slope processes			
Why distinctive landscapes result from human activity (agriculture, forestry, settlement) over time.			
Enquiry question: Why is there a variety of distinctive coastal landscapes in the UK and what are the processes that shape them?			
How geological structure (concordant/discordant, joints and faults) and rock type (hard/soft rock) influence erosional landforms headlands and bays, caves, arches, cliffs, stacks, wave cut platforms) in the formation of coastal landscapes of erosion.			
How UK climate (seasonality, storm frequency, prevailing winds), marine (destructive waves) and sub-aerial processes (mass movement, weathering) are important in coastal landscapes of erosion as well as the rate of coastal retreat			
How sediment transportation (longshore drift) and deposition processes (constructive waves) influence coastal landforms (spits, beaches and bars) on coastal landscapes of deposition.			
How human activities (development, agriculture, industry, coastal management) have direct or indirect effects on coastal landscapes.			
How the interaction of physical and human processes is causing change on one named coastal landscape including the significance of its location.			
Enquiry question: What are the challenges for coastal landscapes and communities and why is there conflict about how to manage them?			
Why there are increasing risks from coastal flooding (consequences of climate change on marine erosion and deposition, including an increased frequency of storms and rising sea level) and the threats to people and environment.			
Why there are costs and benefits to, and conflicting views about, managing coastal processes by hard engineering (groynes and sea walls) and by soft engineering (beach replenishment, slope stabilisation) as well as more sustainable approaches ('do nothing' and 'strategic realignment' linked to Integrated Coastal Zone Management).			
Enquiry question: Why is there a variety of river landscapes in the UK and what are the processes that shape them?			
How river landscapes contrast between the upper courses, mid-courses and lower courses of rivers and why channel shape (width, depth), valley profile, gradient, discharge, velocity and sediment size and shape change along the course of a named UK river.			
The interaction of erosion (hydraulic action, abrasion, attrition and solution), transport (traction, saltation, suspension and solution) and depositional processes in river landform formation (meanders, interlocking spurs, waterfalls, flood plains, levees and oxbow lakes, deltas).			
Influence of climate, geology and slope processes on river landscapes and sediment load and how storm hydrographs and lag-times can be explained by physical factors (geology, soil type, slope, drainage basin shape, antecedent conditions).			
How human activities (urbanisation, land-use change, deforestation) change river landscapes which alter storm hydrographs.			
How the interaction of physical and human processes is causing river flooding on one named river , including the significance of its location.			
Enquiry question: What are the challenges for river landscapes, people and property and how can they be managed?			
Increasing risks from river flooding (increased frequency of storms and land-use change) and the threats to people and environment.			
Costs and benefits of managing flood risk by hard engineering (flood walls, embankments, flood barriers) and by soft engineering (flood plain retention, river restoration).			

EVOLVING UK PHYSICAL LANDSCAPE

In the exam there will be a range of one mark questions (related to AO1) which will be based on defining/naming key terms.

Name one process of coastal erosion (1)

Name one process of river erosion (1)

There will be a range of two, three and four mark questions (linked to AO2 and AO3). The following are examples questions you might see in the paper

Explain **one** way in which glaciation has affected the physical landscape of the UK (2)

Groynes are a type of coastal defence. Explain why groynes can reduce coastal erosion. (2)

Explain why differences in rock type affect the rate of erosion on UK coastlines.

State two features of destructive waves. (2)

Outline one way in which climate change may affect rates of coastal erosion. (2)

State two ways in which a river erodes its channel (2)

Outline one way that human activity can increase flood risk. (2)

Give two benefits of using hard engineering to manage a coastline. (2)

Outline one benefit of using levees to control flooding (2)

Outline how precipitation can increase the likelihood of river flooding. (2)

Outline one way river flooding can affect local people (2)

Explain the formation of a floodplain (3)

State two changes in a river's channel between its upper and lower course. (2)

There will also be a range of 8 mark questions (linked to AO3 and AO4). The following are examples of questions which have been asked in the old (legacy) specification

Explain how the processes of weathering and erosion cause coastal retreat. (6)

Explain how erosion and deposition can cause a river's channel to change (6)

For a named coast (either hard or soft rock), describe its main features (6)

Describe the differences between the features of hard and soft rock coastlines.

Explain the formation of stacks. (8)

Using examples, explain how rapid erosion on coastlines might be managed (6)

Using named examples, explain how rapid erosion on coastlines can be managed using traditional and more modern strategies. (6)

Using examples, describe the costs and benefits of using hard engineering to manage coastal retreat. (6)

For a named coastline, explain why there are conflicting views on how it should be managed (6)

For two different types of sea defences, explain how they reduce erosion. (6)

Using named examples, explain why some flood management schemes have been more successful than others (6)

Using named examples, explain the costs of two different methods of coastal management. (6)

Explain how a spit is formed. You may draw a diagram(s) to help your answer. (6)

For a named flood management scheme, explain how the impact of flooding has been reduced (6)

For a named coastline, examine the costs and benefits of using hard engineering to manage this coastline (8)

Examine the impact of geology and slope processes on river valley shape. (8).

For a named coastline, explain the impact of coastal retreat on local communities (6)

Examine the importance of deposition in the formation of landforms in the lower course of a river (8)

Explain the formation of waterfalls. (8)

Using examples, explain the benefits of using modern holistic (wide ranging) approaches to coastal management (6)

Using examples, explain how human actions can result in an increased risk of flooding. (6)

For a flood you have studied, describe the effects of the flood on the local area. (6)

Assess the physical and human factors which affect the pattern of UK properties at risk from flooding (8)

Weekly Planner:

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time							
Subject 1							
Time							
Subject 2							
Time							
Subject 3							
Time							
Subject 4							

Weekly Planner:

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time							
Subject 1							
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Subject 4							