

## Geography A Level Learning Journey - Coastal Systems and Landscapes

		Coastal Systems and Landscapes
	Case study/ example	
Coasts as natural systems		<b>Systems in physical geography:</b> systems concepts and their application to the development of coastal landscapes – inputs, outputs, energy, stores/components, flows/transfers, positive/negative feedback, dynamic equilibrium.
		The concepts of landform and landscape and how related landforms combine to form characteristic landscapes.
Systems and processes		<b>Sources of energy in coastal environments:</b> winds, waves (constructive and destructive), currents and tides. Low energy and high energy coasts.
		<b>Sediment sources</b> , cells and budgets.
		<b>Geomorphological processes:</b> weathering, mass movement, erosion, transportation and deposition.
		<b>Distinctively coastal processes:</b> marine: erosion – hydraulic action, wave quarrying, corrasion/abrasion, cavitation, solution, attrition; transportation: traction, suspension (longshore/littoral drift) and deposition; sub-aerial weathering, mass movement and runoff
Coastal landscape development  (To include UK and beyond UK examples)		<b>Origin and development of landforms and landscapes of coastal erosion:</b> cliffs and wave cut platforms, cliff profile features including caves, arches and stacks; factors and processes in their development
		<b>Origin and development of landforms and landscapes of coastal deposition:</b> Beaches, simple and compound spits, tombolos, offshore bars, barrier beaches and islands and sand dunes; factors and processes in their development.
		<b>Estuarine mudflat/saltmarsh</b> environments and associated landscapes; factors and processes in their development.
		Eustatic, isostatic and tectonic <b>sea level change:</b> major changes in sea level in the last 10,000 years.  <b>Coastlines of emergence and submergence.</b> Origin and development of associated landforms: raised beaches, marine platforms; rias, fjords, Dalmatian coasts.  Recent and predicted climatic change and potential impact on coasts.
Coastal		<b>Human intervention in coastal landscapes.</b> Traditional approaches to coastal flood and erosion risk: hard and soft

management		<p>engineering.</p> <p>Sustainable approaches to coastal flood risk and coastal erosion management: shoreline management/integrated coastal zone management.</p>
Quantitative and qualitative skills		<p>Students must engage with a range of <b>quantitative</b> and relevant <b>qualitative skills</b>, within the theme landscape systems. These should include observation skills, measurement and geospatial mapping skills and data manipulation and statistical skills applied to field measurements.</p>
Case studies	<p>Holderness</p> <p>Sundarbans</p>	<p><b>Case study of a coastal environment at a local scale: Holderness Coast</b> - coastal environment(s) at a local scale to illustrate and analyse fundamental coastal processes, their landscape outcomes as set out above and engage with field data and challenges represented in their sustainable management</p>
		<p><b>Case study of a contrasting coastline beyond the UK: The Sundarbans Bangladesh</b> - illustrate and analyse how it presents risks and opportunities for human occupation and development and evaluate human responses of resilience, mitigation and adaptation.</p>