

## Unit Overview: Coastal Landscapes and Change

<b>Half- Term:</b>	AUT 1	AUT 2	<b>SPR 1</b>	SPR 2	SUM 1	SUM 2	<b>No of Lessons:</b>	
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### Key Focus for Unit:

*What is the key knowledge being delivered?*

*What is the intent of this unit?*

Coastal landscapes develop due to the interaction of winds, waves and currents, as well as through the contribution of both terrestrial and offshore sources of sediment. These flows of energy and variations in sediment budgets interact with the prevailing geological and lithological characteristics of the coast to operate as coastal systems and produce distinctive coastal landscapes, including those in rocky, sandy and estuarine coastlines. These landscapes are increasingly threatened from physical processes and human activities, and there is a need for holistic and sustainable management of these areas in all the world's coasts. Study must include examples of landscapes from inside and outside the UK.

### Key Knowledge and Big Ideas:

*What **Powerful Knowledge** and **Big Ideas** are explored in this Unit?*

*How have these progressed from previous learning? What **gaps in knowledge** have you identified from **baselining** and how are they being closed?*

#### **Powerful Knowledge:**

- Processes
- Landforms
- Management
- Climate change

#### **Case Studies**

- Jurassic Coast
- Holderness Coast
- Bangladesh
- Maldives
- Tuvalu
- UK winter storms

#### **Big Ideas:**

**Place - what makes a location**

**Scale - local, national, global**

**Interconnections - how and why things are linked**

**Environment- what's around us**

**Change - how things become different**

**Sustainability - now and the future**

**Processes - how things work**

### Unit Assessment:

*How will this unit be assessed?  
What is the frequency of assessments – baselines etc?*

Half termly assessed exam practice

Bi weekly exam practice.

**Key Skills Explored**

**Vocabulary Selected for DVI**

**Links to Previous Unit**

(1)GIS mapping of the variety of coastal landscapes, both for and beyond the UK.  
 (2) Satellite interpretation of a variety of coastlines to attempt to classify them.  
 (3) Field sketches of contrasting coastal landscapes.  
 (4) Using measures of central tendency to classify waves into destructive and constructive wave types.  
 (5) Using student t-test to investigate changes in pebble size and shape along a drift aligned beach and also across the littoral zone to above the storm beach.  
 (6) Map and aerial interpretation of distinctive landforms indicating past of sea level change.  
 (7) Use of GIS, aerial photos and maps to calculate recession rates for a variety of temporal rates (annual changes and longer-term changes).  
 (8) Interrogation of GIS of management cells to ascertain land use values and develop cost/ benefit analysis to inform the choice of coastal management strategy.  
 (9) Photo interpretation of a range of approaches to management to assess environmental impact.  
 (10) Sand dune or salt marsh surveys to assess the impact of succession using an index of diversity,  $X^2$  (Chi-square to compare features of the various zones).

See Physics Maths Tutor glossary

- **Tectonics**

**Links to Careers/Employability**

**How does this unit prepare students for the next unit?**

- Cartographer.
- Climate Change Analyst.
- Climatologist.
- Emergency Management Specialist.
- Geomorphologist.
- Geospatial analyst.
- GIS specialist.
- Hydrologist.
- Coastal engineer

- **Physical Systems**