**Coastal landscape development Review Notes – Erosional landforms, depositional landforms, dunes and salt marshes**

**Erosional landforms: Using Oxford as main source p122-124**

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| **Cliffs and Wave-cut platforms**  **(Oxford p122)** | **Caves/arches/stacks/stumps**  **(Cambridge p79-80)** | **Cliff profile and rate of retreat**  **(Oxford p123-124)** |
| What is a wave-cut platform?  Draw a quick annotated sketch of a cliff and wave-cut platform.  Explain the sequence of events that create a wave-cut platform.  Why do wave-cut platforms rarely extend for more than a few hundred metres?  Why is this an example of negative feedback?  What inputs, processes and outputs are responsible for their formation? e.g. wave energy (input), weathering and erosion (processes), material from cliff collapse (output).  Assess the processes. Which are the most dominant? (Weathering, erosion, transportation?)  Named example in the UK and one overseas. What types of rock are these examples? | Draw a quick annotated sketch of the cave, arch, stack and stump formation.  Explain the sequence of events.  What inputs, processes and outputs are responsible for their formation?  Assess the processes. Which are the most dominant? It may be that different processes are dominant on different parts of the cliff.  Named example in the UK and one overseas. What types of rock make up these examples? | Where is it the steep cliffs are likely to occur?  Where is it that gentle cliffs are likely to occur?  What factors determine the rate of cliff retreat?  What is coastal morphology?  What is meant by:-  Stata  Bedding plains  Joints  Folds  Faults  Dip?  How do the above influence rates of cliff retreat? |

**Can you analyse the factors and processes in the development of each of the following landforms?**

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| **Cliffs and Wave-cut platforms** | **Cliff profiles** | **Caves/Arches/Stacks/Stumps** |
| What weathering processes are acting on each landforms?  What erosional processes are acting on each landform?  What type of mass movement is acting on each landform?  How does wave refraction help the development of caves/arches/stacks/stumps? | | |

**What are discordant/concordant coastlines?**

**With reference to the Dorset coast, how has the coastal landscape been influenced by the geology of the coast?**

**Depositional landforms:**

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| **Beaches (Hodder p 106-107)** | **Spits (Hodder p107-108)** | **Tombolos (Hodder p108)** |
| Where do beaches form?  What are the main zones of the beach? (Oxford p127)  Explain the following main features of a beach:-  Storm beach  Berm  Cusp  Ripple  Runnel  What is the difference between a swash aligned and drift aligned beach?  How and why do beach gradients vary?  Why are large pebbles found further up the beach? (Oxford p128)  Why are pebbles more rounded at the bottom of the beach? (Oxford p128)  How does the profile of a beach vary in summer and winter? (Oxford p128) | Where do spits form and what are they made from?  What is the sequence of events in their formation?  What are the inputs, processes and outputs?  What do you think are the dominant processes in their formation?  Why do many spits have a recurved end? (also known as a recurved lateral)  What might form on and behind a spit? Why?  Why do spits not extent all the way across an estuary?  What is the difference between a simple and a compound spit?  Named example in the UK and one overseas. What type of sediment do they consist of? | What are tombolos?  How do they differ to spits?  What are the inputs, processes and outputs? (same as spits)  What do you think are the dominant processes in their formation? (same as spits)  Named example in the UK and one overseas. What type of sediment do they consist of? |
| **Bar and offshore bar**  **(Hodder p108-109)** | **Barrier beach/Island**  **(Hodder p109)** |  | |
| What are bars and where do they form?  How are they formed? Include longshore drift and the onshore migration of material in your explanation.  What are the inputs, processes and outputs?  What do you think are the dominant processes in their formation?  An example in the UK and one overseas. What type of sediment do they consist of? | **What are they and where do they form?**  What are the inputs, processes and outputs? (same as spits)  What do you think are the dominant processes in their formation? (same as spits)  An example in the UK and one overseas. What type of sediment do they consist of? |  | |

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| **Coastal Landforms of Succession (Change over time)** | |
| What are pioneer species?  What is meant by **halophytic**?  What is climatic climax? (google) | |
| **Psammosere – Sand dunes (Hodder p109-110)** | **Halosere** **– Salt Marshes or Estuarine environments (Hodder p111-112)** |
| What are the conditions needed for the development of a sand dune?  Describe the sequence of events in the formation of sand dunes.  What are the limiting factors for plant development in the embryo dunes?  Name and describe all the dunes in a Psammosere?  Name a pioneer species associated with sand dunes.  How do the following change as you move inland?   * Species diversity * Organic matter * Acidity * Dune height (above sea level) * Availability of freshwater   How can human’s influence the development of the sand dune? | What are the conditions needed for the development of a salt marsh?  What type of material accumulates to form the salt marsh?  What is flocculation?  Describe the sequence of events in the formation of a salt marsh.  What are the limiting factors for plant development in the low salt marsh?  Name a pioneer species associated with a salt marsh.  How do the following change as you move inland?   * Species diversity * Organic matter * Acidity * marsh height (above sea level) * Availability of freshwater   How can human’s influence the development of the salt marsh? |