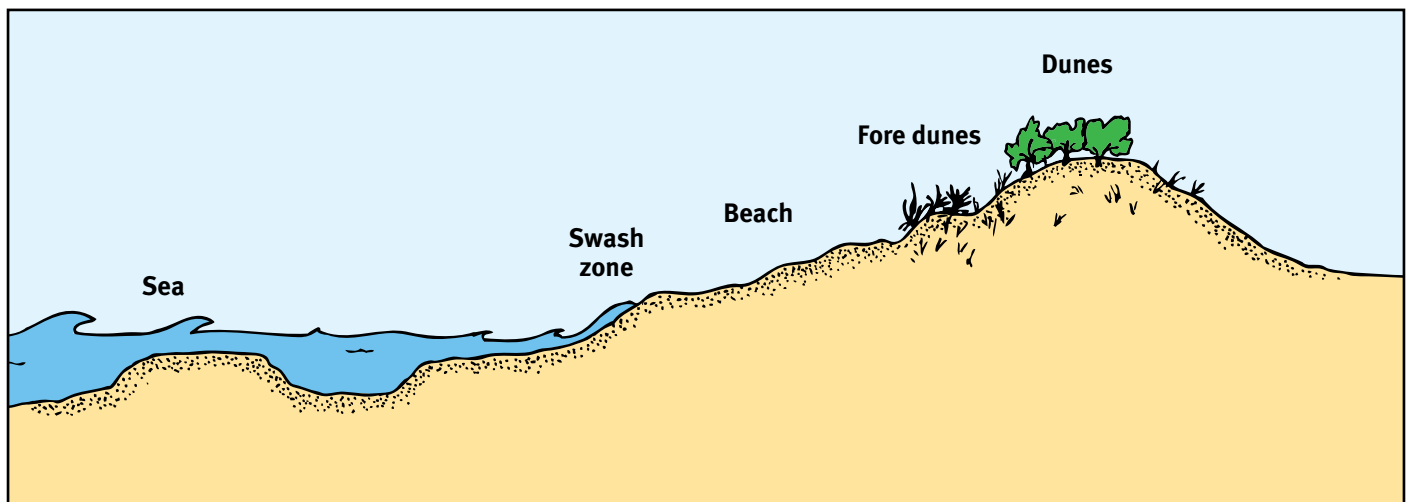


The beach can be divided into three key areas:

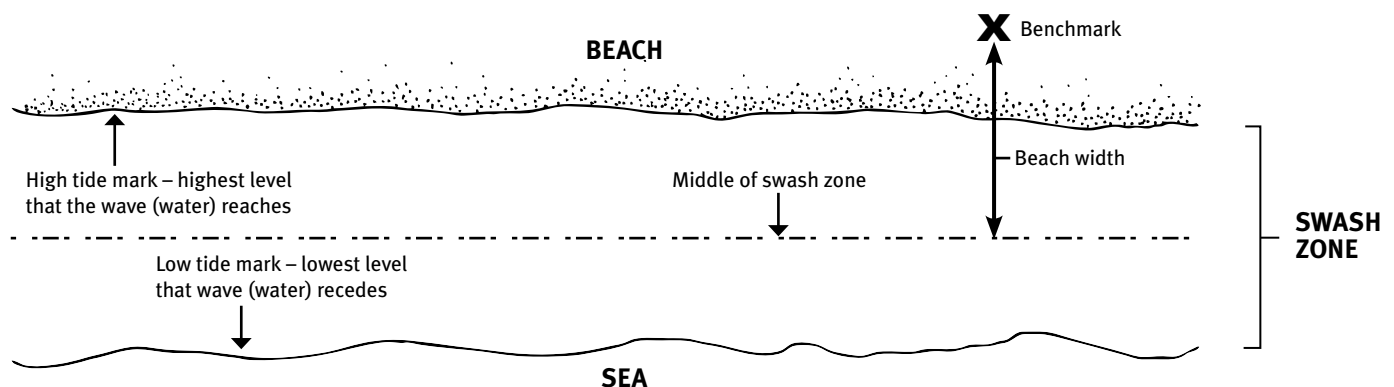
1. The **swash zone** is the section of beach where the waves wash over, according to the tide and weather.
2. The **beach** is located between the high tide mark and the base of the fore dunes, and is usually dry.
3. The **dune** area is where the sand from the beach is blown inland and accumulates into hills. This area can either be bare or covered by vegetation.



We can discover how environmental conditions influence the shape of our coast by measuring the change to the beach profile over time.

To determine the beach profile, choose a benchmark (or feature) inland from the beach that will not change over time, e.g. a well established tree, car park, rocky outcrop or sign.

Measure the beach width from the benchmark to the middle of the swash zone during low tide.



Record the benchmark, beach width and other relevant information in the *Beachcombing Datasheet*.

Beach Profile (continued)

Discussion:

Identify the zones in your beach profile – swash zone, beach and dunes. Look at the various areas on the beach and see which area is more under threat of change. What natural defence systems are there to help combat coastal erosion? Discuss different ways that humans try to combat coastal erosion.

Extension Activity:

Compare the beach profile at different times of the year – sand generally builds up during summer as new sand is deposited (blown or washed in), and then it is eroded (blown or washed away) during the winter storms and high tides. Take photographs of your beach profile to aid in discussions.

