**Coastal erosion**

A feature of coastal erosion that I have studied is a bay and headland. A bay is a curved opening into the coastline, while a headland is a piece of land that juts out into the sea. An example of a Bay that I have studied is Galway Bay.

A bay is formed when a band of hard rock (Basalt) and soft rock (limestone) lie side by side. The soft rock is eroded quicker than the hard rock to form a curved opening. The soft rock is eroded by hydraulic action. This happens when the force of the water hitting against the coast causing the rock to crack, shatter and fall off the cliff face. This rocks then abrades the softer rock. Abrasion occurs when the rocks in the water are being hurled against the coast. Lastly compression also cause erosion. Compression occurs when air is trapped in rocks that expand and causes the rock to crack. This erosion happens over a long period of time and leaves hard rock as a headland that can contain cliffs and caves jutting into the sea. This can be seen in the diagram below

**Coastal deposition**

A feature of coastal deposition that I have studied is a sandbar. This is a narrow ridge of sand that cuts off the mouth of the bay. An example of a sandbar I have studied is Lady’s Island Lake in Wexford.

A sandbar is created by longshore drift. Longshore drift is the way that waves deposit their material at an angle to the shore. The swash comes in at an angle due to the wind and deposits material on the beach. The backwash comes straight back due to gravity and drags some material with it. This results in the material being gradually transported along the shore in a zig zag pattern.

If longshore drift causes the beach to grow into a bay it forms a sand spit. If this is a sheltered bay the spit may seal off the whole bay it is then known as a sandbar. The sealed off water behind the sandbar is known as a lagoon. This can be seen in the diagram below.



**Coasts and People**

People have used coastal areas for a number of activities. These can be economic such as fishing, like in Killybegs, County Donegal. Coasts are also used for recreational purposes and in the summer months Ireland’s beaches are full of tourists who enjoy Irelands’ good surfing conditions and scenic beauty. Recently Ireland’s coasts are being used as a means of getting renewable energy with wind turbines being placed on the west coast of Ireland where there are high winds. Tidal power is also beginning to be realised and Ireland’s coasts are ideal for this, this can provide a range of jobs in the future as well as providing cheap and clean energy.

People can pollute the sea in many ways, oil spills are an apt example, and this can lead to serious environmental issues killing fish, birds and ruining beautiful scenic coastlines. The government could face a bill of up to €1 billion to control pollution around the coast as the quality of water for shellfish production is not adequate. Untreated water flowing into the sea is also a major concern, in fact over 80% of all marine pollution comes from land-based activities and many pollutants are deposited in estuaries and coastal waters. Here the pollutants enter marine food chains, building up their concentrations until they reach toxic levels and have serious effects on all coastal life.