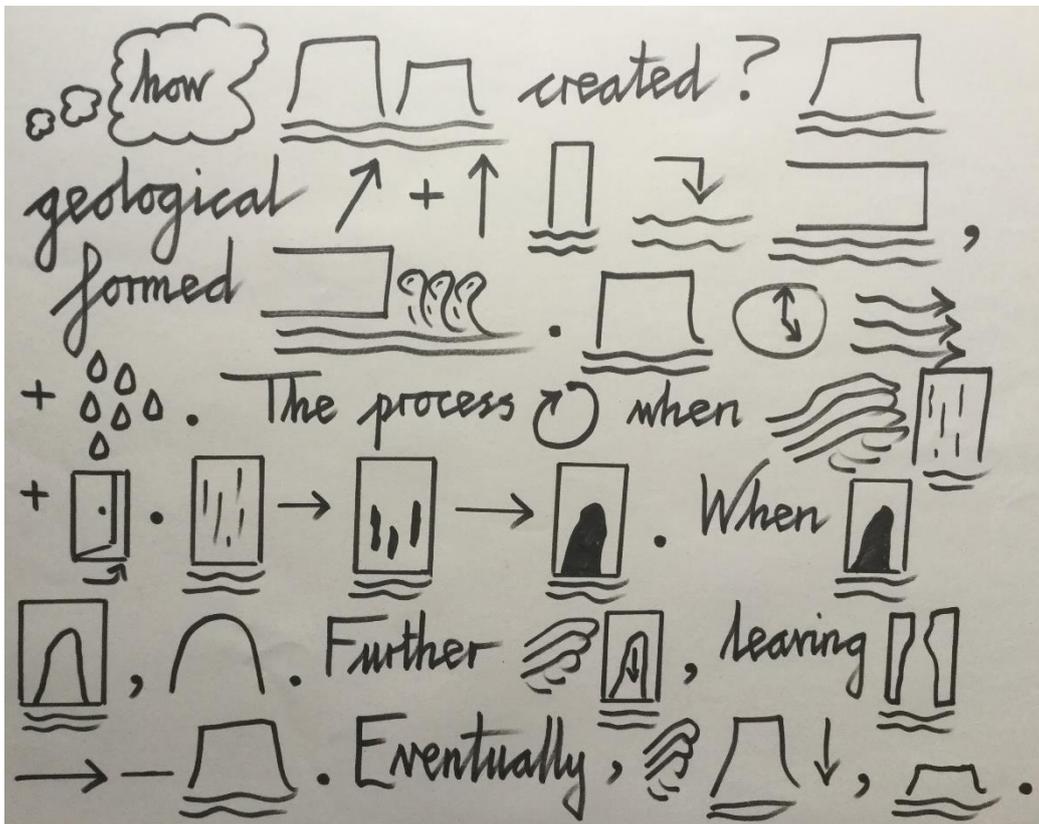
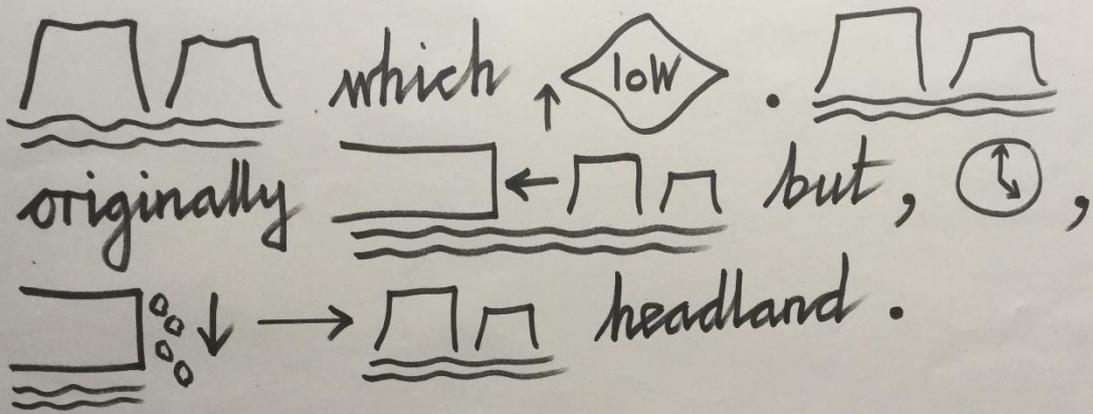


# How Were The Needles Formed?





## **How Were The Needles Formed?**

The Needles are the famous stacks of rock which lie off the western point of the Isle of Wight. These stacks originally made up part of the cliffs but, over time, coastal erosion has separated them from the headland.

You might be wondering how these impressive rock formations were created? A stack is a geological landform consisting of a steep and often vertical column of rock in the sea near a coast, formed by wave erosion. Stacks are formed over time by wind and water. The process usually begins when the sea attacks small cracks in a headland and opens them. The cracks then gradually get larger and turn into a small cave. When the cave wears through the headland, an arch forms. Further erosion causes the arch to collapse, leaving the pillar of hard rock standing away from the coast — the stack. Eventually, erosion will cause the stack to collapse, leaving a stump.

The Needles are made of chalk and flint. They are thirty metres high. Not many people know that they are called The Needles because there used to be a fourth stack (called Lot's Wife) which was in the shape of a needle. Lot's Wife collapsed in 1764 and the rocks fell away into the sea, but the name has stuck.

These stacks are dangerous! Having always been a hazard to ships navigating up The Solent to Portsmouth and Southampton, a lighthouse was constructed up on the cliff tops in 1786. However, in 1859, a new lighthouse was built on the outermost area of the chalk rocks near sea level. This current lighthouse was manned until 1994, when it became automated.

The Needles are best viewed from Alum Bay, which is known for its coloured sands. The Needles and Alum Bay first became popular with tourists over 200 years ago. Every year, nearly half a million people visit Alum Bay to view these jagged chalk stacks and the unique multicoloured sand cliffs.