

# My Knowledge Journal



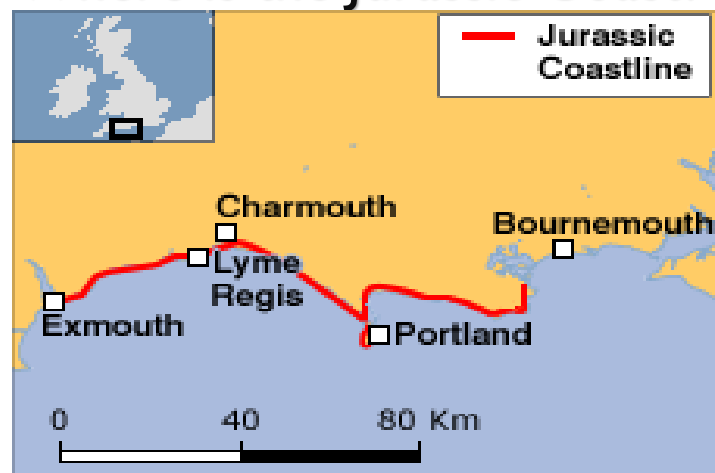
## Our Jurassic Coast

Name: \_\_\_\_\_



# Year 3 Knowledge Journal – Our Jurassic Coast


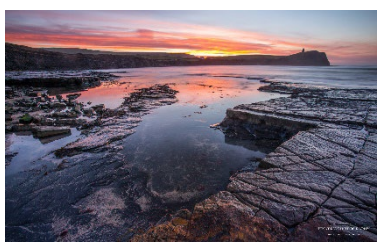



## Where is the Jurassic Coast?



**The Jurassic Coast** begins in Exmouth, East Devon, and continues for 95 miles to Old Harry Rocks, near Swanage, Dorset. It became England's only natural World Heritage Site in 2001 for the outstanding universal value of its rocks, fossils and landforms.

Along 95 miles of largely undeveloped coast the Jurassic Coast displays approximately 185 million years of the Earth's history, including several internationally important fossil localities.

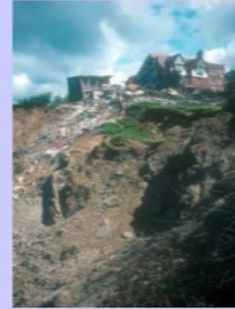
The Jurassic also includes outstanding examples of coastal landforms and processes and is renowned for its contribution to earth science investigations for over 300 years. This coast is considered to be one of the most significant earth science teaching and research sites in the world.

Durdle Door	Kimmeridge Bay	Portland	Lulworth Cove	Old Harry Rocks
				
Durdle Door is probably the most famous stone arch anywhere in the world. It was created when the sea pierced through the Portland limestone around 10,000 years ago. Looking west over the beach, isolated stacks out at sea show where an older coastline once lay.	Kimmeridge Bay, is famous for its safe swimming, rock pooling, canoeing, wind surfing and water sports. The water visibility is excellent for snorkellers and divers. For surfers, it offers Dorset's premier reef break, Broadbench, which can hold waves of up to 15 feet along with other waves in the "K-Bay" area.	Portland is not really an island but is reached over a narrow causeway from Chesil Beach. It is a huge block of limestone, measuring 4.5 miles by 1.75 miles and rising to a height of 400 feet above sea level in the north. The famous Portland Stone quarried here has been used for many well-known buildings. These include both our own St Paul's Cathedral and the United Nations Building in New York.	Formed by the combined forces of the sea and a river swollen by melting ice at the end of the last Ice Age. Lulworth Cove is world famous for its unique geology and landforms including the Lulworth Crumple and Stair Hole.	Standing tall on Handfast Point at the southern end of Studland Bay is one of the most famous landmarks on the South Coast – Old Harry. The chalk formations are popularly known as Old Harry Rocks, but the name Old Harry actually refers to the single stack of chalk standing furthest out to sea. Until 1896 there was another stack known as Old Harry's Wife, but erosion caused her to tumble into the sea, leaving just a stump.

## Key Vocabulary

<b>coast</b>	A zone where the land meets the sea.
<b>erosion</b>	A process where natural forces like water, wind, ice and gravity wear away rocks and soil
<b>deposition</b>	A process when rain, ocean waves or even wind thrash against a beach or rocky cliffs, they erodes away at the Earth and deposits bits of rock, dirt or sand on the ground or into the air.
<b>caves</b>	A large hollow place formed by natural processes in the side of a hill or cliff or underground.
<b>stacks</b>	<i>Are formed when sea arches collapse, leaving a single pillar of rock standing.</i>
<b>arches</b>	Formed by wave erosion.
<b>landslide</b>	A large amount of earth, rock, and other material that moves down a steep slope.
<b>beach</b>	The land at the edge of a lake, ocean, or body of water
<b>sea wall</b>	A wall to protect the sea encroaching on or eroding an area of land.
<b>revetments</b>	Designed to absorb energy from waves but still allows water and sediment to pass through
<b>gabions</b>	Wire cage filled with rocks.
<b>groynes</b>	Built at right angles along a beach. They prevent sand and sediment from moving along the shore.
<b>sediment</b>	Material (as stones and sand) carried onto land or into water by water, wind or a glacier.

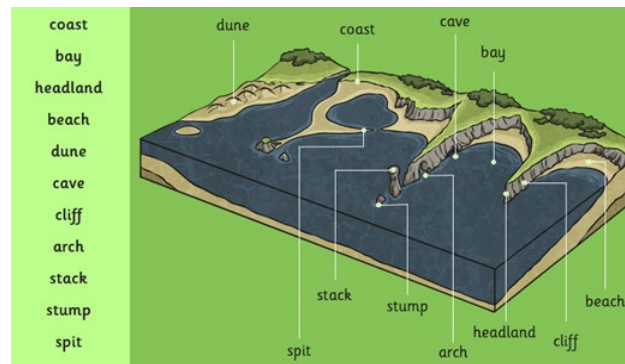
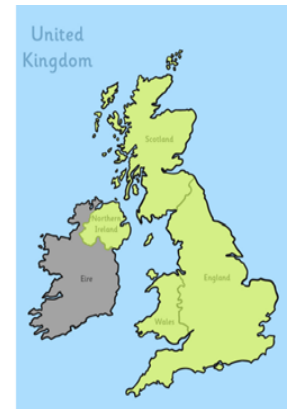
Both human and natural factors can cause erosion. A famous example is the Holbeck Hall Hotel disaster of 1993.



**Holbeck Hall Hotel landslide, 1993.**

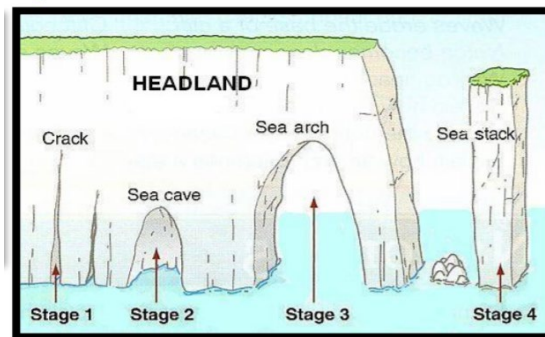


The coastline of the United Kingdom plus its principal islands is about 19 491 miles.



### **Agglestone Rock (Studland, Dorset)**

An enormous block of iron-rich sandstone that stands as a prominent feature in the landscape.



Cliffs and headlands are types of erosion landform. Headlands stick out to sea, surrounded by water on 3 sides.



Coastal areas are constantly changing  
All coastal areas are different.



Some areas are worn away by waves and weather conditions. These are called erosion landforms.

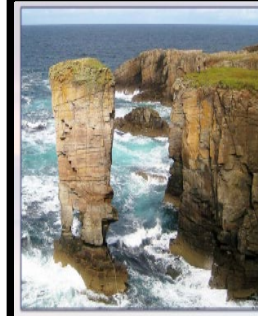


Some areas are built up by materials brought in by the sea. These are called depositional landforms.



Sea caves are formed when waves erode the base of a cliff. They often start as a small crack in the rock. Sand and rocks carried by the waves also help to wear away the rock of the cliff face.

Natural arches are formed when there is a difference in the rate of erosion due to the varied resistance of bedrock. Sometimes the collapse of rock around a sea cave can produce an arch.



Stacks are formed when sea arches collapse, leaving a single pillar of rock standing. Stacks can collapse or become further eroded to a stump.

### Seawalls

A seawall deflects energy away from the coast. They prevent erosion damage and flooding by absorbing the energy from the waves. Seawalls are expensive to build.



### Revetments

A revetment is a cheaper alternative to a seawall. It is designed to absorb some of the energy from the waves but still allows water and sediment to pass through it.



### Gabions

A gabion is a wire cage filled with rocks. The cages are stacked together against a cliff face or coast to help protect the area against erosion and weather damage.



### Groynes

Groynes are built at right angles along a beach. They prevent sand and sediment from moving along the shore. This builds up the beach which acts as natural protection against coastal erosion.



Beaches are the most common form of **depositional** landform. They are created when materials (sand, rocks, pebbles and sediment) are transported from elsewhere on the coastline and deposited to form a beach.



There are two main types of beach: sand and shingle. Shingle beaches are narrower and steeper than sand beaches.