Hands On Learning
with Reading Museum Service

LIGHTHOUSE G120

A lighthouse is a tall structure usually built on coastal headland or an island. Its purpose is to guide ships and warn them of any obstruction or hazard. It can also act as a navigation point for aircraft at night. The lighthouse projects a beam of light out to sea from an electric powered lamp at the top of the structure. This beam can be seen for many miles, but if the weather is particularly bad a foghorn is also needed.

All the lighthouses in England, Wales, the Channel Islands and the British territory of Gibraltar are controlled by Trinity House in London (pictured on the right). Please also look at the map included. The safety of ships around the coast of the British Isles has been the main concern of Trinity House since 1514 when Henry VII granted it a charter.



The first real lighthouse was built in about 300 BC on the island of Pharos close to the port of Alexandria in Egypt. Standing at about 130 metres high, it was one of the tallest buildings in the ancient world and remained so for many centuries. It was identified as one of the Seven Wonders of the World by classical writers of the time, although unfortunately the remains are no longer visible. This picture shows an artist's impression of its three-tiered, stone tower with a constantly burning fire to guide ships into the harbour.



In the past, the light on top of the lighthouse was fuelled by fire, gas or oil and they needed to be constantly manned to keep the light burning brightly. In 1763 William Hutchinson discovered a way to project the light using mirrors so that it could be seen from much further away. These mirrors needed to be cleaned and polished so that the light shone as clearly as possible. Electric lights were introduced to most lighthouses during the first half of the twentieth century, along with a more sophisticated method of projecting the beam using lenses and prisms.

Today, all lighthouses maintained by Trinity House are operated automatically without any need for people to work there. The lighthouse at North Foreland in Kent was the last to be automated in 1998 (see information card).

Reading Borough Council
Heritage Lottery Fund

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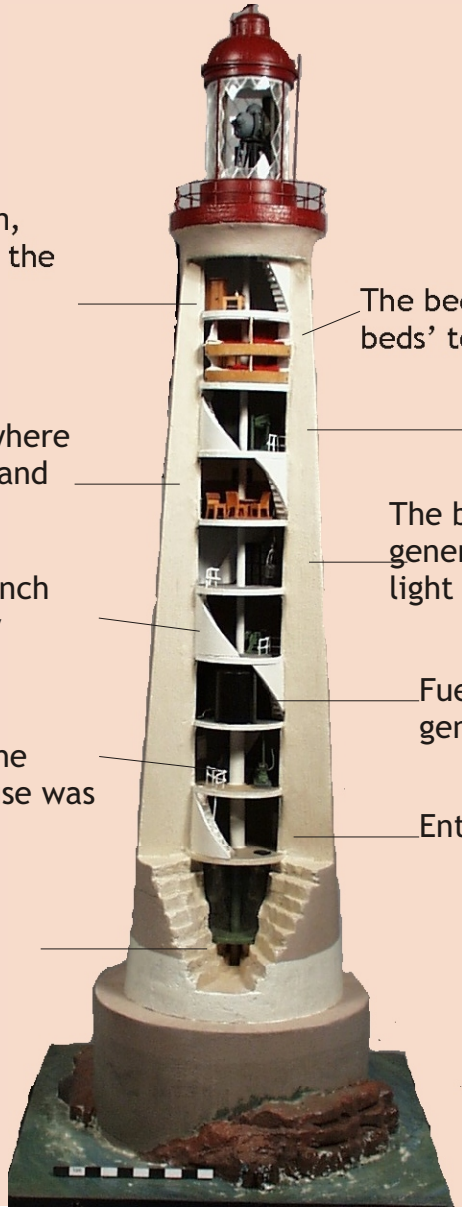
The model in this box is based on a lighthouse in Plymouth harbour called Smeaton's Tower. The first lighthouse was constructed in Plymouth in 1690 and it has been rebuilt and altered many times since. The last crew waved a fond farewell to their unusual home in 1982 when it converted to automatic control. The model shows what it would have been like before 1982. There were nine rooms in the 40-metre tower each serving a different purpose. The diagram below will help you to identify the functions of each room and the activities that took place on a day-to-day basis in order to keep the lighthouse running.



The serivce room, which contained the radio telephone

The bedroom with 'banana beds' to fit the curved walls

Signalling lamp

The living room where the crew cooked and ate.

The battery room. If the generators broke down the light was powered from here

The winch room. The winch was used to lift up heavy suppies

Fuel store. Oil for the generator was kept here

The engine room, where the electricity for the lighthouse was generated

Entrance room

Fresh water tank