

August 17

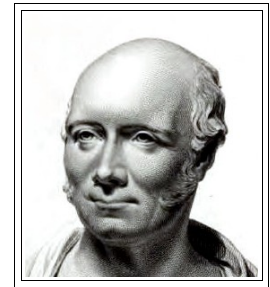
**Memory verse:**

**Thou shalt not oppress an hired servant** that is poor and needy,  
whether he be of thy brethren,  
or of thy strangers that are in thy land within thy gates:  
Deuteronomy 24:14

Younger children can learn the words in **bold** and understand that a “hired servant” is any employee – someone who works for another person for wages. Today's lesson is about some “hired servants” who had an exciting and difficult task!

**Something to read from history**<sup>1</sup>

On **17<sup>th</sup> August** 1807 Robert Stevenson and his workmen set sail. They were about to begin work on one of the seven wonders of the engineering world. It was a long and very dangerous job. Get out you atlas and you will be able to see where they were. I have **highlighted** the places you need to find. Here is how Stevenson himself describes how they set out:



The tide happening to fall late in the evening of Monday the 17th, the party, counting twenty-four in number, embarked on board of the *Smeaton* about 10 o'clock P. M., and sailed from **Arbroath** with a gentle breeze at west. Our ship's colours having been flying all day in compliment to the commencement of the work, the other vessels in the harbour also saluted, which made a very gay appearance.

A number of the friends and acquaintances of those on board having been thus collected, the piers, though at a late hour, were perfectly crowded, and just as the *Smeaton* cleared the harbour, all on board united in giving three hearty cheers, which were returned by those on shore in such good earnest, that, in the still of the evening, the sound must have been heard in all parts of the town, re-echoing from the walls and lofty turrets of the venerable Abbey of Aberbrothwick.

The writer felt much satisfaction at the manner of this parting scene; though he must own, that the present rejoicing was, on his part, mingled with occasional reflections upon the responsibility of his situation, which extended to the safety of all who should be engaged in this perilous work. With such sensations he retired to his cabin; but as the artificers were rather inclined to move about the deck than to remain in their confined births below, his repose was transient, and the vessel being small, every motion was necessarily heard. Some who were musically inclined occasionally sung; but he listened with peculiar pleasure to the sailor at the helm, who hummed over Dibdin's characteristic air,

“They say there's a Providence sits up aloft,  
To keep watch for the life of Poor Jack.”<sup>2</sup>

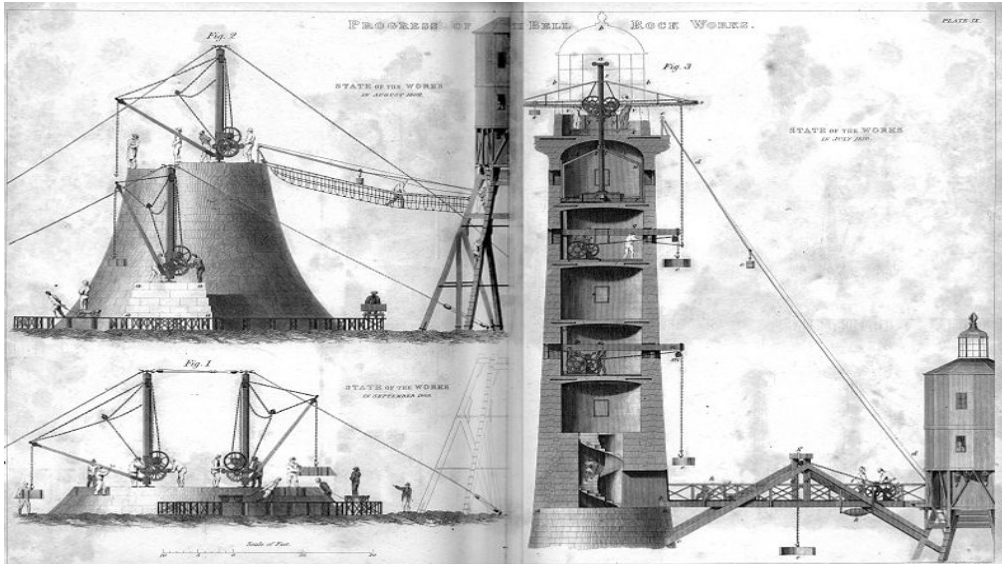
Robert Stevenson and his men were on their way to build a lighthouse on the **Inchcape Rock**.

Robert Stevenson (1772-1850) founded a family of Scottish civil engineers. He began work as an apprentice to his stepfather who was a member of Scotland's Northern Lighthouse Board. This newly established institution, had responsibility for building much-needed lighthouses. At the time

<sup>1</sup> Information from <https://200.bellrock.org.uk/index.htm> and other sources.

<sup>2</sup> Robert Stevenson, *An Account of the Bell Rock Light-House Including the Details of the Erection and Peculiar Structure of That Edifice*, (Edinburgh, 1824)

none of Scotland's dangerous and narrow sea passages had proper lighthouses. Look at your atlas and you will see that the **coast of Scotland** has many deep inlets and islands – in fact it is the most difficult coast to navigate in all Europe. In 1797 Robert Stevenson became Engineer to the Lighthouse Board, succeeding his stepfather in the post. He held this post for almost fifty years and during that time he designed many lighthouses, oversaw their construction and as time went on added improvements to them.



The Bell Rock lighthouse still stands on Inchcape Rock today. It is the oldest working sea-washed lighthouse in the whole world. The novelist Walter Scott was a member of the Northern Lighthouse Board and when visiting the Bell Rock lighthouse he wrote this in the visitor's book:

*Pharos Locquitor.*<sup>3</sup>

*Far in the bosom of the deep  
O'er these wild shelves my watch I keep  
A ruddy gem of changeful light  
Bound on the dusky brow of Night  
The Seaman bids my lustre hail  
And scorns to strike his tim'rous sail.*

This is a short verse which would not be too difficult to memorise for your “store” of memorised poems. In the lesson for 20<sup>th</sup> May Optional Resources is the Poem “The Inchcape Rock” by Robert Southey. If you learned it in May be sure to say it today. If you did not learn it then you could add at least some of the verses to your “store” now.

The construction of the lighthouse took nearly four years and was attended with many difficulties. There was an urgent need for a light in this spot which consists of a long, treacherous reef in the North Sea, about 12 miles East of **Dundee** and in the route of vessels sailing to and from the **Firth of Tay** and the **Firth of Forth**. For much of the time it is completely submerged. Only at low tide is it visible above the water. At high tide it is some five metres below the waves. In an average winter before the construction of the lighthouse six ships would be wrecked on the reef. It was the loss of the warship, HMS York, on the reef in 1804 that was the final impetus for the building of the lighthouse.

<sup>3</sup> “The lighthouse begins to speak”. In a play you might see the stage direction: “Enter Bill. Loq.” Loq. is short for lquitur and the direction means, “Bill enters and begins to speak”.

Stevenson had been asked to design a lighthouse for the Inchcape Rock in 1799 but when the design was submitted it was shelved because of its unusual nature and because of Stevenson's youth – he was still only 30. Then came the loss of the York. Stevenson sent his design to a famous Scottish engineer, John Rennie, who approved of it and also of Stevenson's estimates of the costs. The loss of the York had caused a furore in Parliament and legislation was passed approving the proposal to build a lighthouse. Rennie was appointed by the Northern Lighthouse Board to build it and Stevenson was appointed as his chief assistant.

To make his design Stevenson had studied the earlier work of John Smeaton (1724 – 1792) who had designed the Eddystone Lighthouse and he visited this lighthouse in 1801.<sup>4</sup> It was built in an oak-tree shape which Smeaton had recognised as outstanding for strength and Stevenson copied this idea. Like Smeaton too, Stevenson used interlocking stones in his design. But there were also some new features in the design for the Bell Rock Lighthouse, the most obvious of which was the rotating light, powered by clockwork.

If you did the lesson for 20<sup>th</sup> May you will remember the different flashing patterns that enable sailors to distinguish between lighthouses. It was Stevenson who invented the rotation and shuttering systems that made this possible. He was awarded a gold medal by King William I of the Netherlands for this innovation.

Stevenson also built a railway out on that partially submerged rock! Here he explains why:

From the wasting effects of the sea, the Bell Rock is formed into numerous benches and gullies, and its surface is consequently extremely rough and irregular. The site of the Light-house being in a central position on the rock, it became necessary to make some provision for conveying the large blocks of stone speedily from the respective landing-places to the site of the building; or at least within the range of the cranes or machinery to be employed in laying them. In ordinary situations, the most obvious method would have been to clear away the inequalities of the rock; but here, from the lowness of its position in the water, such an operation would have been extremely tedious and difficult. Besides, every portion of the Bell Rock was held sacred, excepting in so far as it was absolutely necessary to excavate or remove part of it, in fixing the Beacon-house, and in preparing the foundation of the Light-house. Instead, therefore, of quarrying the rock, the writer found that the most advisable process would be, to lay cast-iron railways round the site of the Light-house, projecting to the several landing-places, on which waggons could easily be wheeled in all directions...

You will see the Beacon-house, which provided accommodation for workmen staying on the rock on the right-hand side of the picture above.

You will know if you did the lesson for 20<sup>th</sup> May that this was not the first time anyone had tried to mark the rock with some kind of warning. As Stevenson put it:

There is a tradition, that an Abbot of Aberbrothock directed a bell to be erected on the Rock, so connected with a floating apparatus, that the winds and sea acted upon it, and tolled the bell, thus giving warning to the mariner of his approaching danger. Upon similar authority, the bell, it is said, was afterwards carried off by pirates, and the humane intentions of the Abbot thus frustrated....

Of the erection of the Bell, and of the machinery by which it was rung, if such ever existed, it would have been interesting to have had some authentic evidence. But, though a search has been made in the chartularies of the Abbey of Aberbrothock, preserved in the Advocates' Library, and containing a variety of grants and other deeds, from the middle of the 13th to the end of the 15th century, no

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4 See the lesson for 20<sup>th</sup> May.



trace is to be found of the Bell Rock, or any thing connected with it. The erection of the bell is not, however, an improbable conjecture; and we can more readily suppose that an attempt of that kind was made, than that it had been intentionally removed, which in no measure accords with the respect and veneration entertained by seamen of all classes for land-marks; more especially, as there seems to be no difficulty in accounting for the disappearance of such an apparatus unprotected, as it must have been, from the raging element of the sea.

### A painting to look at

The artist Joseph Mallord William Turner (1775– 1851) spent a lifetime painting the sea. We will be looking at more of his paintings in future lessons.<sup>5</sup> Stevenson commissioned him to paint the lighthouse so that engravings could be made from the picture and included in his book *An Account of the Bell Rock Light-House*. Turner loved contrasting human achievements with the forces of nature in his work. He loved to astonish the viewer and arouse feelings of awe and wonder. Stevenson's Light-house was an ideal subject for him. Turner did not visit the light-house himself.

Mr Andrew Masson, an artist who in early life had been at sea, having expressed a desire to reside in the Light-house for some time during winter, that he might observe the waves in a storm, was readily furnished with an opportunity. He went there in the month of December 1816, and remained for six weeks and four days, when he produced various sketches of the appearances which he witnessed; and Mr Macdonald... made several outlines from actual observation, in the winter of 1820. All of these were put into the hands of Mr Turner...

This is what Turner used, together with Stevenson's own vivid description of what it was like to be in the lighthouse during a storm, to produce his water colour.



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5 See lessons for 19<sup>th</sup> December and 21<sup>st</sup> June.

### Something to paint or draw

Notice that Turner worked from sketches by others as well as description to create this inspiring painting. If you have been able to have a holiday this summer you may have taken some photos – perhaps even one of a light-house. Choose one of your holiday snaps to copy yourself. You can change the weather conditions if you like too and adapt the picture in any other way you like. If you do not have any holiday pictures of your own you could find a picture, perhaps in a tourist brochure, and turn it into your own work of art.

### Something to think about



The Bible often refers to itself as a light. (e.g. Psalm 119:105) A light-house is a particular type of light. It is a warning that points out danger to be avoided. We can look at the Ten Commandments in Exodus 20 for a Bible light-house. Here we see listed for us the things that we need to avoid in order to stay out of danger.

Alas! It is not so easy, is it? The Bell Rock light-house is of no use to a sailor who is determined to go near the rocks even though the light-house shows him they are there! We are just the same, constantly running into danger in our thoughts, words and actions though we know we are being sinful. How amazing that God sent his Son Jesus Christ to die so that sinners such as we can be rescued!