

November 17th

Memory Verse:

Nevertheless **we**,
according to his promise,
look for new heavens and a new earth,
wherein dwelleth righteousness.

2 Peter 3:13

Younger children can learn the words in bold. For more information on this text see yesterday's lesson.

We've learned a lot about canals in these lessons including the Panama Canal,¹ the Macclesfield Canal,² the Lake Eyrie Canal³ and earlier this month the crisis over the Suez Canal.⁴ One of these lessons⁵ includes a method for making your own model canal that would be ideal to do today (if you did not do it before) because today is the anniversary of the opening of the Suez Canal in 1869. But how did that last canal, the Suez Canal, come to be built and what kind of ships use it today?

Something to read from engineering history

Get out your atlas and find the **Suez Canal**; it connects the **Mediterranean** Sea with the **Red Sea** and it crosses the **Isthmus of Suez** from North to South. You can see how important this waterway is as it makes a huge short cut for shipping that would otherwise have to go all round the continent of Africa. The Suez Canal lops 7,000 km from the journey. Today it is still one of the most used waterways in the world. In ancient times there was a canal connecting the Mediterranean and the Red Sea to the Nile. It was often out of use but carried traffic during a number of periods including the reign of Darius the Mede (550-486BC) and also of the Roman Emperor Trajan (98-117AD).

The French dictator Napoleon (1769-1821) wanted a French canal in this region as he was at war with Britain and wanted to harm British trade. He thought a French controlled canal would force the British to either pay huge dues to France to use the canal or continue to use slower routes and so lose out to faster competition. He had the area surveyed but there was a mistake in the survey. It showed a difference in height of about 3 metres between the two seas. Napoleon abandoned the canal attempt but in fact there is no significant difference and so the Suez canal has no locks to slow down and complicate transit. Not until the nineteenth century did the canal become a reality – and a Frenchman was responsible.



The French diplomat, Ferdinand De Lesseps (1805-1894), was the man responsible for the canal's construction. He was posted to Egypt and soon became fascinated by the idea of a canal. For a while the Egyptian authorities resisted the idea. Then in 1854, when De Lesseps was no longer in the French diplomatic service, the Egyptian ruler, Sa'id Pasha, invited him to begin work on the project. Two French engineers drew up the plans, and an international committee was formed to forward the idea. At first Britain did not approve of the idea – for exactly the reasons Napoleon had liked it. However, building a canal costs money. Egypt had shares in the canal which were auctioned to raise money in 1875. The British government bought a large number of shares making Britain a major shareholder. Work began in 1859 and took ten years to complete.

1 See the lesson for 4th May and September 13th.

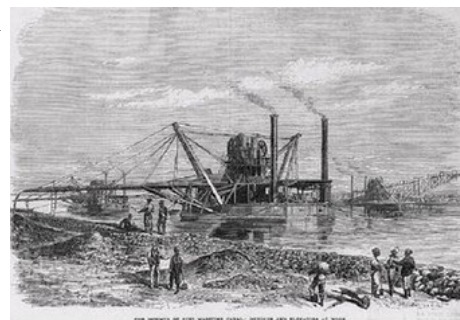
2 See the lesson for 9th November.

3 See the lesson for 3rd November (yet to come)

4 See the lesson for 3rd November.

5 9th November.

In the early stages picks and shovels were used to dig the canal by hand but by 1863 steam powered mechanical diggers and dredges came into use, speeding up the work.



Something to do



Today the Suez canal is still a route used by bulk oil carriers and container ships. In 2015 the canal was dredged deeper and expanded by the completion of an extra shipping lane for part of its length. This means very large ships can use the canal. The largest ships that can use the canal are classified as “Suezmax” vessels and they must not exceed 160,000 Tonnes, 400 metres length, (nearly a quarter of a mile) 77.5 metres width or 68 metres height. These huge dimensions are difficult to visualise but if you have a street map or OS map of a suitable scale of your area, you may be able to sketch out a Suezmax dimension on it. Then you may be able to go out and walk the length of such an enormous vessel.⁶

We noticed that the Suez Canal takes roughly 7,000 km off the journey from India to Europe. That is about 4,350 miles. Can you imagine how far that is? If you drove along an imaginary motorway of that length at top speed (70 mph) without stopping how long would it take?

Something to think about⁷

Robert Owen (1771–1858) died on **17th November**. He was a Welsh factory owner, pioneer of trades unions and the founder of communities based on utopian⁸ theories in Britain and the USA.



A poor boy himself, Robert Owen rose in society by hard work and then married an heiress. He believed that fit and contented workers produced the best work and the highest output. He accordingly improved conditions at his factory in New Lanark near Glasgow. He made the working conditions clean, did not use apprentices from workhouses and set up a co-operative shop for his workers. These are good things, of course, but both the other joint owners of the mill and the workers (who resented changes) opposed him at first. The owners were soon convinced when the profits increased. The workers and their families took longer to adjust. Owen’s mill became a show-piece for visitors but he was disappointed that owners of other factories did not take up his ideas. He then decided that the workers would have to act to improve their own conditions. In 1833 he began to

⁶ For more on the Suez Canal today see <https://www.youtube.com/watch?v=v9yAi2Jibu8>.

⁷ Adapted from *The Story of God's Dealings with our Nation* Volume 2 which is available here: <https://www.creationresearchstore.com/s/search?q=Dealings>.

⁸ We learned about Utopia in the lesson for 17th April. If you did not do that lesson go back and look at the section on Sir Thomas More (inventor of the term) now. This is an important topic for older children so don't miss it!

organise the Grand National Consolidated Trades Union. His idea was that through this organisation workers could press for better conditions and pay.

Owen continued to plan schemes he thought would benefit working people both in Britain and America, setting up settlements that were Communist in principle. However all his "... schemes for the welfare of his fellows less fortunate than himself came to nothing."⁹ Unlike other great reformers of his time, such as Wilberforce and Shaftesbury, and those whose ideas he anticipated such as Cadbury and Lever later in the century, Owen was not in any way Christian or motivated by Christian principles. He constantly expected that people, if treated well, would act unselfishly and high-mindedly. Christians realise that because of sin, human beings can act badly whether they are treated well or not. His schemes were planned for "... unselfish, high-minded people, and too many of the actual people were selfish and unprincipled."¹⁰

9 Brett, S. R., *From George III to George VI* (London, 1959), p. 212.

10 Brett, R.S., *ibid.*, p. 212.