

April 9th

Memory verse for the week:

The heavens declare the glory of God; and the firmament sheweth his handywork. Psalm 19:1

Something to read aloud

When war broke out in the Crimea in 1854 no proper arrangements had been made for dealing with the sick and the wounded. The first winter of the war found our troops facing great hardships in terrible conditions, with snow and ice when it was freezing and a wilderness of black mud when it thawed. In addition to the mounting numbers of wounded, hundreds of men were falling ill every day, and there were no proper hospital arrangements.

So the British government asked a man who was famous for building bridges and railways to design a hospital that could be made here in Britain in pieces, shipped to the Crimea, and erected near the battle front. His name was Isambard Kingdom Brunel, and he was born on **April 9th** 1806.

Brunel set to work with all the energy and skill that had made him our finest engineer, sometimes working twenty hours a day. He knew that many lives depended on his work.

His hospital had everything necessary for the comfort and care of the soldiers, including an elaborate drainage system. When it was ready the building was taken to pieces and sent to the Crimea in two ships for re-erection. By the end of the war the portable hospital had dealt with nearly 2,000 patients.

Brunel is famous for his steam ships, railways, bridges and tunnels. His magnificent iron steam ship *The Great Eastern* laid the cable under the Atlantic Ocean that carried the first telegraph messages from Britain to America.¹

Brunel was chief engineer of the Great Western Railway which ran from London to Bristol and later on to Exeter. At Box Hill between Bath and Chippenham, the railway passes through a spectacular tunnel. Nearly two miles long, the tunnel was the longest in the world when it was built. For many years railway enthusiasts and mathematicians argued about whether Brunel had designed and positioned the tunnel so that on his birthday (**9th April**) the sun would shine directly through it. In 2017 it was possible to find out whether or not this was the case. The tunnel had been closed for maintenance work and The Great Western Railway's communications manager, Mr Paul Gentleman, was able to watch the sun rise from within the tunnel. He reported that the sight was spectacular with the sun “nestling” in the V shape formed by the railway cutting outside the tunnel entrance.

Brunel was recovering from an accident in a different tunnel which he and his father were building under the River Thames when he won a competition to design a bridge over the Avon Gorge. His winning design was the Clifton Suspension Bridge which you can see in this picture.²



Something to make

If you have Lego, Knex, or any other building bricks you can “engineer” a bridge. You can test how much weight it will take. The best thing for this is some kitchen weights if you have them. Otherwise any similar weight items such as pound coins or identical wooden blocks would do. Count the number you can stack on your bridge before it falls. Engineers use the laws of physics (as

¹See April 2nd Samuel Morse.

²You can find out how this type of bridge works here: <https://science.howstuffworks.com/engineering/civil/bridge6.htm>

you have just done) and they can be sure that what they have tested will work in the same way every time. You can illustrate this with your model. If you make a bridge out of Lego and test it you might find that it will stand with a 200g weight on it but will fall if you put 250g on. If you construct the bridge again in exactly the same way you will find that it will stand with a 200g weight on it but fall if you put 250g on it. No matter how many times you do the experiment the results will be the same. This is because the action of the weight on your structure is governed by the **laws of physics**.

The lessons for March 15th and October 10th have more about bridges and further bridge building suggestions.

Something to think about

Where did the unchanging **laws of physics** come from? We know who *discovered* them and who first wrote about them – Newton, Boyle, Galileo and so on – but the laws were there and acting before scientists discovered them. Samuel Morse invented the telegraph but no one *invented* the electricity that made it work. Why do these laws never change?

The laws of physics are a consequence of God's unchanging (immutable) nature. The Bible says: “Every good gift and every perfect gift is from above, and cometh down from the Father of lights, with whom is **no variableness**, neither shadow of turning.” James 1:17.

Something to do

If you have toy trains, Brio, Lego or anything similar. You might like to make a layout with a tunnel. You can build your tunnel out of plain wooden bricks, Lego, cardboard or even (if you are careful) a pile of books. If you use cardboard you could paint your tunnel realistically. What about the tunnel mouth? Brunel's Box Tunnel has a beautiful entrance and you could design an elegant tunnel mouth too. Look at the Woodhead Tunnel mouth on the next page for some ideas. An alternative would be a literal Box Tunnel – a cardboard box would make good tunnel material! If you have no trains you could make a road tunnel for your toy cars. There are many road tunnels in the world, especially in mountainous countries.



Drawing and colouring

On the last page is a picture of a steam engine approaching the Woodhead Tunnel in Yorkshire. If you can print the page you could colour the picture. If you can't print the page you might like to copy the picture or draw a picture of your own model tunnel.

Something to read from history.³

Zion chapel Hebden Bridge opened on Good Friday **9th April** 1882. It was an offshoot of the Wainsgate chapel associated with the hymn-writer John Fawcett about whom we read in the lesson for 6th January. By 1963 the chapel had fallen on hard times. All that was left of the once thriving congregation was one member, Miss Florrie Walton and another member who was too unwell to

³ Information from <https://www.gbcstockport.org.uk/manse/charlesworth> – and from talking to Miss Florrie Walton myself when I was young!

attend the services. Surely the time had come for the chapel to close. But Miss Walton did not think so! Every Sunday she opened the chapel. Every Sunday she read her Bible, prayed and even sang hymns on her own. But what could one old lady do? The chapel must close eventually.

Miss Walton decided to get some help. She approached a deacon of the chapel at Hall Green in nearby Haworth. Could they help? Two deacons from Hall Green went over on Sunday afternoons when they could to Hebden Bridge. Sometimes a preacher would go with them. Sometimes one of them would preach. On Sunday mornings or when they could not come, Miss Walton opened the chapel just the same. She read her Bible, prayed and sang hymns.



Miss Walton was convinced that the chapel should not close. She prayed that God would fill it again. As she looked round the chapel she could see that it was dilapidated. She decided to get it decorated. The chapel had a bank account but, like all such accounts, two signatures were needed on cheques. By now there was only Miss Walton so she could not access the money. She paid to have the chapel decorated out of her own money.

One Sunday morning Miss Walton was sitting in the chapel reading her Bible. She read Haggai 1:4, “*Is it time for you, O ye, to dwell in your cieled houses, and this house lie waste?*” the prophet here was talking about God's temple in Jerusalem. Miss Walton had recently had electricity laid on to her home and the words struck her! The chapel was still lit by gas light but at home she now had electricity. The very next day she made arrangements. The chapel would have an electricity supply!

But these things in themselves were not enough. Miss Walton prayed earnestly that a pastor, a young man who would work as an evangelist would come to Hebden Bridge as pastor for the chapel. In 1968 a young man arrived, Mr Dick Eccles. He preached at the chapel several times and Miss Walton was sure he was the man God wanted. She was the only member of the chapel and she called him to be the pastor!

Of course a minister needs to have a salary. That would have been very difficult for Miss Walton. However, some funds were arranged from an organisation that helped to support pastors and in the following year Mr Eccles and his wife moved in to the little house built into the hillside under the chapel. A new era for Zion Chapel had begun.

Mr Eccles worked hard evangelizing in the area and sometimes teams of young people would come from Southampton for days of hill walking and evenings of door-to-door work in the town. The Sunday School was re-started. At first there was little response. Then one lady was converted and then her husband. Then there were other conversions and some people whose jobs had moved them to the area also joined the church. Before he death in 1980 Miss Florrie Walton had seen the church flourish again. What an example of perseverance and prayer!

Map Work

There are all sorts of places you can find on a map in today's lessons from Chippenham to the Crimea via Hebden Bridge! It will make the lesson come alive if you find out where they are.

