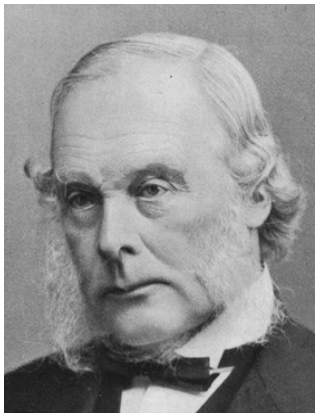
5th April

Memory verse for the week:

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

"Firm-a-ment" means "sky" and is a lovely long word for little one to enjoy getting their tongues round. Like many verses in the Psalms this one falls into two halves, each of which restates and expands on the other. Having two "teams" each repeating a different half of the verse and answering one another and then swapping places is a good way to learn this Psalm. Alternatively very little ones can learn the words in **bold** only.

Something to read[1] and an experiment to do



Do you have a bottle of Listerine in your bathroom? If you do you have something named after Joseph Lister (1827-1912) who was born on 5th April. It was Lister who discovered and first used antiseptics to prevent the infection of wounds. Lister came from a scientific background: his Quaker father had developed great improvements in the microscope. As someone who was not a member of the Church of England, he was barred from going to Oxford or Cambridge Universities to study and he studied instead at London University Medical School (founded 1826) which prided itself on admitting students without making them pass a religious test. While a student, Lister became ill with smallpox, a very dangerous illness. He recovered but felt very depressed and sad. He took a holiday in Ireland before continuing his studies. Perhaps it was at this time that he became a Christian, although exactly when this happened is hard to establish. That he did become a Christian is well known from his own writings and those who knew him noted that, "[t]hroughout his life, he remained a gentle, shy, unassuming man, firm in his purpose because he humbly believed himself to be directed by God."[2]

What was this "purpose" to which Lister was devoted? It was to save life from being lost by infection during surgery.

In Lister's day improvements were beginning in surgery, such as anaesthetics but loss of life after an operation was still common. Lister realised that dirt was one of the main causes and in the Glasgow Infirmary where he worked he insisted on as much cleanliness as possible. The days when surgeons operated wearing dirty bloodstained aprons, using dirty instruments and unwashed hands were nearly over. The death rate dropped as a result of what Lister did at Glasgow Infirmary but not enough to convince him he had found the whole answer. He felt certain that something from outside the patient was entering the open wounds and causing the poisoning. But what?

Then he read an article by the great French chemist Louis Pasteur, in which the putrefaction of flesh was said to be caused by "living ferments", germs or microbes.[3] Lister knew that here was the answer to the problem. His patients were dying because tiny microbes, germs called bacteria, were entering their open wounds from the air.

In August 1865, Lister, after making many experiments without success, applied carbolic acid to a wound in a boy's leg. The wound healed easily and a first life had been saved by the use of an antiseptic.

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1 Adapted from Owen, Evan, *What Happened Today?* Book 1 available on the *Mothers' Companion* flashdrive https://motherscompanion.weebly.com/

2 https://creation.com/joseph-lister-father-of-modern-surgery

3 Read about this in the lesson for April 20th.

Lister cured case after case, and published articles describing his work in *The Lancet*, the journal of the medical profession. But many of his colleagues regarded antisepsis as nonsense and it was many years before it became common practice in the hospitals, with hands and instruments, as well as wounds, being washed in carbolic acid.[4]

Here is a simple experiment you can do. It takes a week to do but it is worth it!

You will need:
Gloves
Potato
Sharp knife
4 Ziplock type food/freezer bags
Marker
any antiseptic such as Listerine, TCP, Savlon etc.

Method:
Wash your hands, put the gloves on, and then cut the potato in four equal pieces.
Take the first potato piece and put it in one of the bags. Seal the bag and write "control" in the space for labelling the contents.
Now rub the cut surface of the second piece of potato on a kitchen worktop, the floor or the inside of your sink. Put it into a bag and label it with the name of the surface on which you rubbed it.
Take the third piece of potato and paint it all over with antiseptic. Put it in a bag and label it "antiseptic."
Take the fourth piece of potato and rub it all over with your bare hands. Put it into a bag and label it "touched with hands."
Put all the bags and put them somewhere like a cupboard where it is dark and at room temperature and leave them there for a week.
Then you can take out the bags and look at the potatoes but do not take them out of the bags. What do you see on the pieces? Which potato has the most growth on it? Which potato has the least? Why do you think this is?

Did you see black, green, or white fuzz on the potato slices? These are germs, called mould and bacteria. There are so many of them growing together than you can see them without a microscope Which had the most?

The potato piece labelled "control" shows you how many germs there were on the surface of the potato when you cut it. A control is important because it enables the experimenter to check their results. Did your antiseptic work in reducing the number of germs?

## Something to read from history

Do you go to Sunday School? If you do I am sure you enjoy learning from the Bible with your teachers. Have you ever wondered when Sunday Schools were invented? The man who is often credited with starting the first Sunday School, Robert Raikes (1736-1811), died on April 5th 1811. His was a most unusual funeral as there were many children in attendance and every one of them was given a shilling and a piece of plum cake![5]

In Bible times boys were taught the Old Testament Scriptures on the Sabbath in the Synagogue. In more recent times Martin Luther set up schools where children came on a Sunday to learn the catechism, sing and pray together. In England many people are on record as having gathered

4 See, for instance, the lesson for 20th April!
5 A shilling is equivalent to 5p. Its value in 1811 was about £4 in today's money.

children together on a Sunday to teach them the Bible in the seventeenth and eighteenth centuries. We have records of Hannah and Anne Bell of High Wickham, Joseph Alleine of Tauton, David Taunton in Macclesfield, and the delightfully named Owd Jemmy o' th' Hey of Little Lever near Boulton all of whom gathered children together for Bible teaching on a Sunday and there must have been many more. But Robert Raikes has gone down in history in connection with Sunday Schools because he publicised the schools he started, reporting on their achievements and this caused the growth of a Sunday School movement, with Sunday Schools springing up all over the country.

The reason that Robert Raikes was able to publicise his Sunday School work was that he was the owner of a newspaper, *The Gloucester Journal*. The Raikes family were well off and important citizens of Gloucester. They were related by marriage to William Wilberforce (1759-1833) who worked to improve the lot of all sorts of poor and oppressed people, although he is most famous for his work on behalf of slaves. The preacher George Whitfield[6] and also the brothers John and Charles Wesley often visited the Raikes's family home. Robert Raikes was concerned about the conditions of prisoners in the gaol at Gloucester and he worked with the prison reformer John Howard who was also a Christian. He was also horrified to find children, coarse and brutal in their behaviour, who worked in factories during the week roaming the streets and getting into mischief on a Sunday. What could he do, he wondered, to prevent people living evil lives and perhaps ending up in prison?

Robert Raikes was undoubtedly a Christian but he had some ideas that would have horrified his friends Wesley and Whitfield. He reasoned like this:

Ignorance leads to idleness (unemployment), idleness leads to evil doing and evil doing leads to prison. By the time a person is grown up it is too late to educate them to be well behaved; their bad habits will be ingrained. What is needed is to teach good habits to children.

Can you see what is wrong with this reasoning? Whitfield and the Wesleys knew that no amount of education or teaching good habits will change a person's heart. It is interesting to discover that the founder of the Sunday School Movement was aiming primarily not to save the souls of the children, but to improve their behaviour! Of course the Bible was taught in Raikes's Sunday Schools and that very fact would have no doubt be used to the saving of children's souls. We cannot read the Bible for long without noticing that we are sinners in need of a Saviour and that Jesus Christ came to save.

Robert Raikes' Sunday School began at 10 in the morning and lasted all day. It included going to a church service as part of the timetable. Robert Raikes paid his teachers but in the Sundays Schools that sprang up in imitation of his work the teachers were usually volunteers and often ladies. Robert Raikes had to teach reading: his pupils could not otherwise read the Bible for themselves. We would be surprised to find reading on the curriculum of a modern Sunday School as today everyone is supposed to learn to read elsewhere! Sunday Schools have done an immense amount of good over the years and often in ways quite different to that which the founder of the movement originally expected: God has been pleased to use Sunday Schools to bring many to a knowledge of himself.[7]

6 See the lesson for July 1st for more about George Whitfield.

7 https://www.crichbaptist.org/robert-raikes-sunday-school-movement/ has more details on Robert Raikes.