22nd July

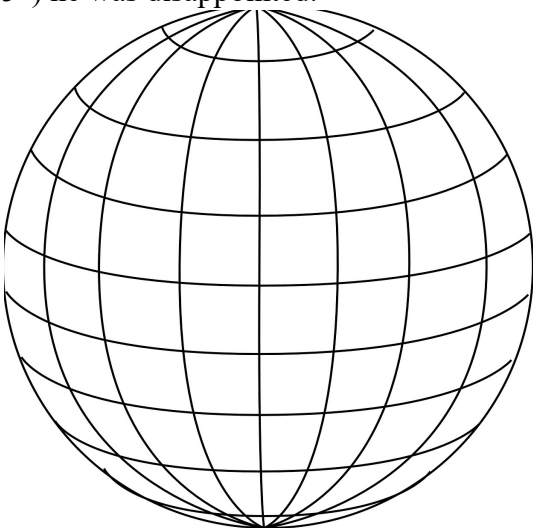
Memory Verse

And he shewed me a pure river of water of life, clear as crystal, proceeding out of the throne of God and of the Lamb. In the midst of the street of it, and on either side of the river, was there the tree of life... Revelation 22:1,2a.

Map work

Another river today! Get out your Atlas and find the longest river in Canada. It is the Mackenzie River and it is named after an explorer who was born on the Isle of Lewis in Scotland, Alexander Mackenzie (1764-1820).

Alexander Mackenzie worked for the North West Company in Canada, a trading company that dealt mainly in furs. These warm skins of the various abundant wild animals were at that time an important export product of Canada. He had explored what the native Canadians called the "Great River"(the Mackenzie river) in 1798, hoping to find a route to the North West Passage. Like Drake (see lesson for June 17th) and Cook (see lesson for June 25th) he was disappointed.



To aid him in his exploration and mapping work, Mackenzie wanted to be able to calculate Longitude better. In order to navigate, sailors and explorers divided the globe with a grid of imaginary lines. Those running round the earth parallel to the equator are called lines of Latitude. These could easily be calculated when at sea by measuring the angle of the sun with an instrument called a quadrant. The lines running round the earth and passing through the two poles are called lines of *Long*itude (they run *long*ways round). These are much harder to calculate. Galileo had worked out that the moons of Jupiter could be used to find Longitude but in practice, especially onboard ship, there was not enough stability to take sufficiently accurate observations. In 1714 the British government offered a large sum of money as a prize for a clock that would remain accurate at sea and so enable the calculation of Longitude to be made by comparing the time on the clock with the time by the sun. The prize was awarded to John Harrison for his Marine Chronometer – as you will know if you did the lesson for 3rd April. Mackenzie decided to go back to Britain in 1791 so that he could study the new advances being made in calculating Longitude.

He returned to Canada in 1792 and set out on what was to be his most famous expedition. In the party were his cousin, Alexander Mackay, two native guides, six Canadians and a dog. Their objective was to find a way across Canada from the East to the Pacific coast in the West.

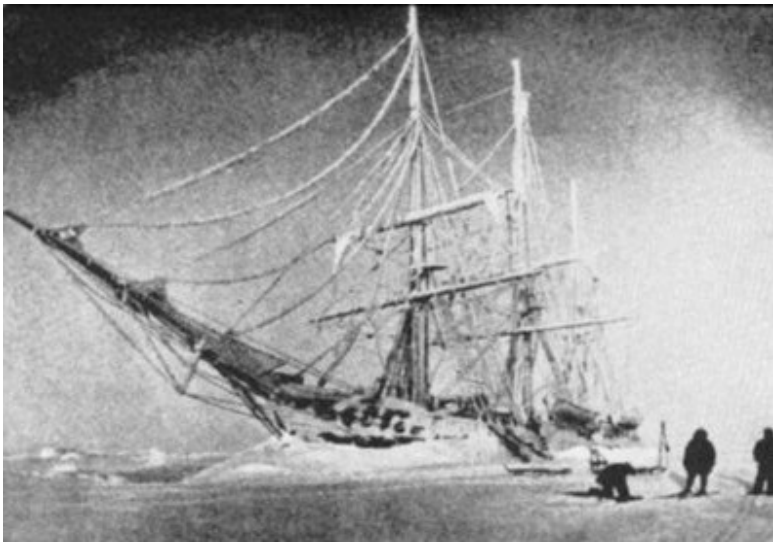
The expedition set out on 10th October 1792 from Fort Chipewyan. Can you follow their route?

1. Via the Pine River to the Peace River.
2. Fort Fork. Here they stayed for the winter.
3. Peace River, across the Great Divide, a mountainous chain that stretches all the way down the western side of the North American continent, to the headwaters of the Fraser River.
4. West Road River
5. Across the Coast Mountains
6. Down the Bella Coola River to the sea.

Mackenzie and his party reached the Pacific coast on 20 July 1793, at Bella Coola, British Columbia, on North Bentinck Arm, an inlet of the Pacific Ocean. Captain George Vancouver[1] had called at Bella Coola 48 days earlier so Mackenzie only just missed meeting him.

The Makenzie river is not only the longest in Canada, it is the second longest in the whole of North America. Do you know which American River is the very longest? Guess and then look at the answer below.[2]

Antarctic winter



The ship in the picture is the first vessel ever to stay in the Antarctic throughout the whole of the winter. She is the Belgian ship the *RV Belgica* and her multinational crew saw the sunrise for the first time after the darkness of the Antarctic winter on 22nd July 1898. They had not seen the sun for 63 days.

Aboard the ship were the American Frederick Cook (as medical officer) and the Norwegian Roald Amundsen. Amundsen would go on to be the first person to reach the South Pole in 1911. The expedition leader, Adrien Victor Joseph de Gerlache de Gomery, was an officer in the Belgian navy.

Frederick Cook later claimed to have reached the North Pole in 1908 but his claim was disputed by Robert Peary, who also claimed to have reached it in 1909. To this day controversy rages about which of them really got there first.

The *Belgica* was Norwegian built and had a steam powered propeller as well as sails. She had a specially strengthened bow to help her deal with ice and her thick planks were sheeted with iron. She was still in use right up to the Second World War!

The B*elgica* became trapped in the ice of the Bellinghausen Sea in February. If you look at the map given for the 11th June lesson you can find the Bellinghausen Sea. Marked on it is an island, *Peter I Øy.* It was not far from this spot that the *Belgica* was trapped. The expedition which sailed in the *Belgica* was not equipped for the Arctic winter. There was not enough food and warm clothing aboard her. The men hunted penguins and seals and stored them before the winter weather set in but they barely survived the ordeal. The expedition leader, de Gomery, took a dislike to the seal and penguin meat and forbade its use. As a result the men began to become ill with scurvy. The discovery that scurvy was caused by a deficiency in vitamin C was still some thirty years in the future, although Captain Cook had found that lime juice prevented the disease. However Frederick Cook the medical officer had had experience in the Arctic and was sure fresh meat was the cure. He retrieved some of the penguin and seal meat from their store in the ice. By now de Gomery and his second in command were too ill to do their job so Frederick Cook and Roald Amundsen took over. The men were feeling very low in spirits as well as in health. Cook and Amundsen organised regular turns by the fire, regular meals of the meat and plenty of complicated card games. Gradually the men felt better, their health began to improve and so did their spirits.

When the warmer weather returned the ship did not float free. Worried that they would be

1 See Lesson for May 19th.
2 Mississippi

condemned to another winter in the ice the men, feeling better by now, dug channels through the ice to speed up the break up of the floe. This was successful and the ship was freed, first into tight pack ice and then into the open sea.

As a result of being in the Antarctic right round the year the expedition, despite all the sickness and difficulty, managed to bring valuable scientific data back to Belgium.[3]

Something to do

If you made a *Race to the South Pole* game for the lesson on 11th June today would be a good day to get it out and play again. Perhaps you could mark a square "Overwinter in the ice – miss a turn."

Something to write

William Archibald Spooner (1844– 1930) was born on the 22nd July. Dr Spooner was the original absent minded professor. His slips of the tongue involving the transposed initial letters of words led to such mistakes (when humorous) being called Spoonerisms. It is difficult to sort out the things Dr Spooner actually said from things people made up and attributed to him later but apparently he told off one student for, "**f**ighting a **l**iar in the quadrangle" and another for having, "**h**issed my **m**ystery lecture" while another was rebuked with the words, "You have **t**asted two **w**orms"!

Of course, Dr Spooner did not say these funny things because he was stupid – far from it! He was actually so clever that his speech just could not keep up with his brain. Sometimes, too, he was clearly thinking about something else that was more important. Such as the occasion when he invited a faculty member to tea, "to welcome our new archaeology Fellow."
"But, sir," the man replied, "I *am* our new archaeology Fellow."
"Never mind," Spooner is said to have replied, "Come all the same."

Can you invent some spoonerisms of you own? If you can, try writing a dotty conversation involving them. Perhaps you could invent a character to go with them. Or maybe you could write a little story about an absent-minded person. See what your imagination can come up with...

3https://web.archive.org/web/20101009092129/http://coolantarctica.com/Antarctica%20fact%20file/History/antarctic_whos_who_belgica.htm has further information.