Famous Mathematicians

I can explore how mathematics impacts the world and the important part it has played in advances and inventions.

Mary Somerville

Mary was born in Scotland in Jedburgh in 1780. Mary had two brothers who were both given an education, but at this time educating girls was seen as unimportant. When Mary was ten years old she did spend one year at a boarding school for girls in Musselburgh.

After her year at school, Mary continued to read as much as she could at home and her Uncle helped her to learn Latin. Her piano teacher gave her a book about Science and Astronomy and Mary started to study this book. She was also interested in studying algebra and became fascinated by maths.

In 1827, Mary was asked to translate a French science book which had 5 volumes about what they knew at that time about gravitational maths. Mary didn't just translate the book, she also explained the maths behind how the solar system works. She wanted to translate it and explain the maths in 'common language' so that people would be more able to understand the information.

She then went on to write another book about space and she wrote about the possibility of there being an unknown planet. This led to the discovery of the planet Neptune. Another of her books was called Physical Geography and it was used in schools and universities to teach people about the Geography of land for many years. It studied the features of land, water, mountains, volcanoes, oceans, rivers and lakes. She also wrote about light, electricity, storms and magnetism. She finished the book by writing about plants, birds and mammals and about the relationship between humans and nature.

It is said that Mary was friends with Ada Lovelace' mum and that she tutored Ada and introduced her to Charles Babbage.

Mary Somerville was a strong supporter of women's education and women's rights. In 1879 Somerville College at Oxford University was named after her because of her strong support for women's education.

Benoit Mandelbrot

Benoit Madelbrot was born in Poland in 1924 and had to flee to France with his family in 1936 to keep safe during the war. He studied in Paris before moving to America to start working at IBM, a big computing company. He is famous for discovering 'fractal geometry'.

Fractals are complex shapes that are built on formulas and are essential for computer graphics and animation. If we didn't have fractals, we would be much further behind where we are now with computer made images. Benoit showed how you could use an equation for each pixel to make a picture on a computer.

Fractal formulas are also used to design mobile phone antennas and computer chips!
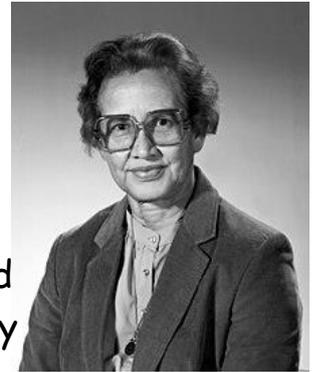
Katherine Johnson

Katherine Johnson was an American mathematician who worked as a NASA scientist. She was born in 1918 and died in February this year, aged 101.

Her maths calculations about the mechanics of a space craft flying were important in the success of the first American crewed spaceflights. She helped to work out difficult calculations about the path of the spacecraft, when the spacecraft should be launched and emergency return paths for spaceflights. She worked on calculations for the first American astronaut in Space and also on the return path for flights to the moon.
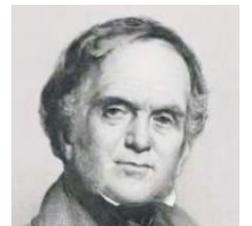
William Playfair

William Playfair was born in 1759 in Scotland. He was an engineer and mathematician. He is famous for developing the use of statistical graphs. He invented line graphs, bar charts and pie charts! He started using bar charts to gather information on Scotland's imports and exports. He had two famous brothers, James Playfair the architect and his brother John Playfair was also a famous mathematician.