

# Alexander Fleming

(1881 – 1955)

Alexander Fleming was born on 6th August 1881 near Darvel, Ayrshire and grew up on a farm. He moved to London when he was 13 and worked for a shipping company. In 1903, Fleming went to study medicine at St Mary's hospital. He later became a bacteriologist; someone who studies simple, tiny living cells called bacteria.

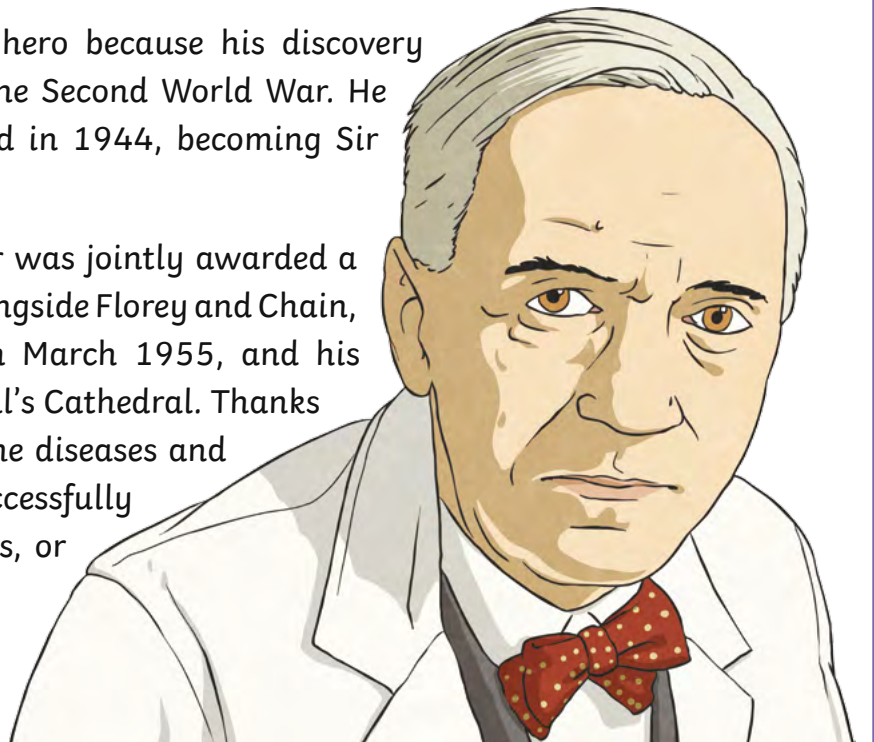
Some bacteria help us stay healthy, but some bacteria can also cause infection and disease. In France during the First World War, Fleming saw many soldiers die from infected wounds. As a result, he endeavoured to do more medical research to try to find antibacterial treatments.

In August 1928, Fleming left a jar of mould in his laboratory before he went on holiday. When he returned, he noticed that bacteria, which was a green-yellow colour, had entirely covered the jar, except for one area which remained clear of the bacteria. This was Fleming's breakthrough; the moment he realized that some antibacterial agent had stopped the bacteria growing. He later identified this antibacterial agent as a form of penicillin.

In 1939, two scientists, Howard Florey and Ernst Chain, began investigating methods to produce more of Fleming's penicillin. Their work meant that penicillin could go on to be produced in large amounts and enabled the first ever antibiotics to be made. Infections such as meningitis and scarlet fever could now be treated and many bacterial infections were completely eliminated.

Fleming was hailed as a hero because his discovery saved many lives during the Second World War. He was awarded a knighthood in 1944, becoming Sir Alexander Fleming.

For his work, Sir Alexander was jointly awarded a Nobel Prize in Medicine, alongside Florey and Chain, in 1945. He died on 11th March 1955, and his ashes were placed in St Paul's Cathedral. Thanks to Fleming's discovery, some diseases and infections have been successfully treated for almost 80 years, or entirely eliminated.



1. Where and when was Alexander Fleming born and where did he spend his childhood?
2. What does a bacteriologist do and why do you think their work is important?
3. During the First World War, what did Fleming witness happening that could have been prevented?
4. What accidental discovery gave Fleming a breakthrough in his research?
5. What had Fleming discovered?

6. How did Florey and Chain's work develop Fleming's discovery?
7. With antibiotics available for the first time, what did this mean for public health?
8. Why do you think Alexander Fleming was hailed as a hero and awarded a knighthood?
9. In what other way was Sir Alexander Fleming's work recognised?
10. If Alexander Fleming had not made this discovery in medicine, how might this have changed our lives?