

Alexander Fleming

You will need

- A clean, empty tablet bottle
- A volunteer to mime being a doctor
- Labels saying 'germ' (see below)
- Labels saying 'penicillin' (see below)

Note: *Italic* = instructions for the teacher and book/song titles.

Introduction

Start by miming the work of a doctor. Either do this yourself or ask a pupil to act out the part in front of the other pupils. The pupils have to guess the profession being acted.

Talk about visits to the family doctor. If you are suffering from a chest infection or tonsillitis, then it means that certain harmful bacteria or germs have been growing and are making you feel unwell. (This can be dramatised. Start with one pupil then add pupils in twos until there is a large group of them. Pupils can wear labels saying 'germ'.)

These germs are so small that they are invisible to the human eye, but they can make you very ill. The doctor may prescribe a course of ANTIBIOTICS. These medicines attack the harmful bacteria/germs that are the cause of infections. *Mime the antibiotics 'attacking' the group of germs. Pupils can wear labels saying 'antibiotic'.* The first of these antibiotics was discovered over seventy years ago and here is how it happened.

Core material

Younger pupils

Select from the information below. Explain any difficult words or repeat the dramas.



Fleming receiving the Nobel prize

Older pupils

Show the tablet bottle you have brought with you (do not open it). Ask pupils about the safety rules concerning medicines. (Teachers may wish to do some safety education here.) Share a particular time when you had to take a course of tablets.

Alexander Fleming was a British scientist (a bacteriologist) who discovered the life-saving antibiotic penicillin. He was born in Lochfield, Scotland in 1881 but came to London to study medicine. After working in a military hospital in Boulogne during the First World War, he returned to his work at St Mary's Hospital in London. He was determined to find a substance that would kill harmful bacteria/germs. (Possible place to repeat the growing germs drama.)

In 1928, he noticed that a spot of green mould stopped the growth of some bacteria (germs) he was cultivating. He was very curious. He grew further quantities of the mould and found that it stopped other deadly germs growing, including anthrax and diphtheria bacilli. (Possible place to repeat the antibiotic attack drama.)

COURAGEOUS

Inspirational CHRISTIANS

Extraordinary

Amazing



Alexander Fleming worked with two other scientists, Howard Florey and Ernst Chain, to remove from the mould the chemicals that stopped the harmful bacteria and germs growing. From these chemicals he developed an antibiotic called penicillin. Penicillin was the first antibiotic to be discovered and by itself has saved millions of lives. It was an important breakthrough in medicine, for, from that one medicine, many antibiotics have since been developed and harmful bacteria have been destroyed.

In 1941, a British policeman became the first person to be treated with the antibiotic penicillin. The patient was suffering from bacterial blood poisoning and, after a dose of penicillin, he started to make a recovery. Despite his initial recovery, he died because there was not enough penicillin available to kill all the dangerous bacteria. However, in the August of the next year, a friend of Alexander Fleming lay dying in St Mary's Hospital and so the famous doctor asked for some penicillin to treat his friend. The patient made a rapid recovery. During the final years of the Second World War, it is estimated that thousands of soldiers were saved because the antibiotic penicillin was available to fight against harmful bacteria and it has been used across the world to treat a whole range of diseases.

Alexander Fleming will always be remembered as the man who discovered

penicillin, the first of many lifesaving antibiotics. He worked for many more years in his laboratory, and later on he was asked what was the greatest discovery he had made. He was a Christian and his answer was simple. 'My greatest discovery,' he said, 'was that I needed God, and that I was nothing without him and that he loved me and showed his love by sending Jesus to save me.' Alexander Fleming, a very important person, knew that his skill was a gift from God and that God had helped him in his work.

Prayer/Reflection

Pupils can indicate their hands, hearts and minds as the prayer is read.

Father, you gave us hands to work for others.
(*Touch one hand with a finger.*)

You gave us hearts to love others. (*Touch the chest.*)

You gave us minds to solve the problems in our world. (*Touch the head.*)

Thank you, Father, for the example of Alexander Fleming who used his mind to solve the problem of how to fight certain harmful bacteria/germs.

Music suggestions

Hands to work Someone's Singing, Lord,
B Harrop (A & C Black)

Today Songs for Every Assembly, M and H
Johnson (Out of the Ark Music).

PHILIPPIANS 4: 13
GIVE
CHRIST GIVES ME
THE STRENGTH TO
FACE ANYTHING.

deserm

bernicillin