Answers

1. Where and when was Alexander Fleming born and where did he spend his childhood?
   Alexander Fleming was born on 6th August 1881 near Darvel, Ayrshire and grew up on a farm.

2. What does a bacteriologist do and why do you think their work is important?
   A bacteriologist is someone who studies simple, tiny living cells called bacteria. Perhaps their work is important because some bacteria help us stay healthy but some bacteria can also cause infection and disease and we need to know about both and how to prevent and cure disease.

3. During the First World War, what did Fleming witness happening that could have been prevented?
   In France during The First World War, Fleming had seen many soldiers dying from infected wounds; infection that could be prevented with the correct treatment.

4. What accidental discovery gave Fleming a breakthrough in his research?
   In August 1928, Fleming had left a jar of mould in his laboratory whilst he was on holiday. He noticed that bacteria, which was a green yellow mould, had covered the dish except for one area which was clear of the bacteria. This was Fleming's breakthrough; the moment he correctly worked out that some antibacterial agent had stopped the bacteria growing.

5. What had Fleming discovered?
   Fleming had discovered a form of penicillin.

6. How did Florey and Chain's work develop Fleming's discovery?
   Florey and Chain worked on producing more of Fleming's penicillin. Their work meant that penicillin could go on to be produced in large amounts and the first ever antibiotics were made.

7. With antibiotics available for the first time, what did this mean for public health?
   This meant infections such as meningitis and scarlet fever could now be treated and many bacterial infections were eliminated.

8. Why do you think Alexander Fleming was hailed as a hero and awarded a knighthood?
   OPEN Perhaps because in discovering something that could fight and eliminate diseases he prevented a lot of pain and suffering and saved so many lives.

9. In what other way was Sir Alexander Fleming's work recognised?
   Sir Alexander was jointly awarded a Nobel prize in Medicine with Florey and Chain in 1945 and when he died his ashes were placed in St Paul's Cathedral (a place where many of the nation's heroes are laid to rest); perhaps a sign of how highly he was regarded in the U.K.

10. If Alexander Fleming had not made this discovery in medicine, how might this have changed our lives?

    OPEN Perhaps many diseases that we now take for granted as preventable and curable would in fact still be very serious and potentially fatal.