

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 began to study medicine. Fleming's later work focused on simple, tiny living cells called bacteria.

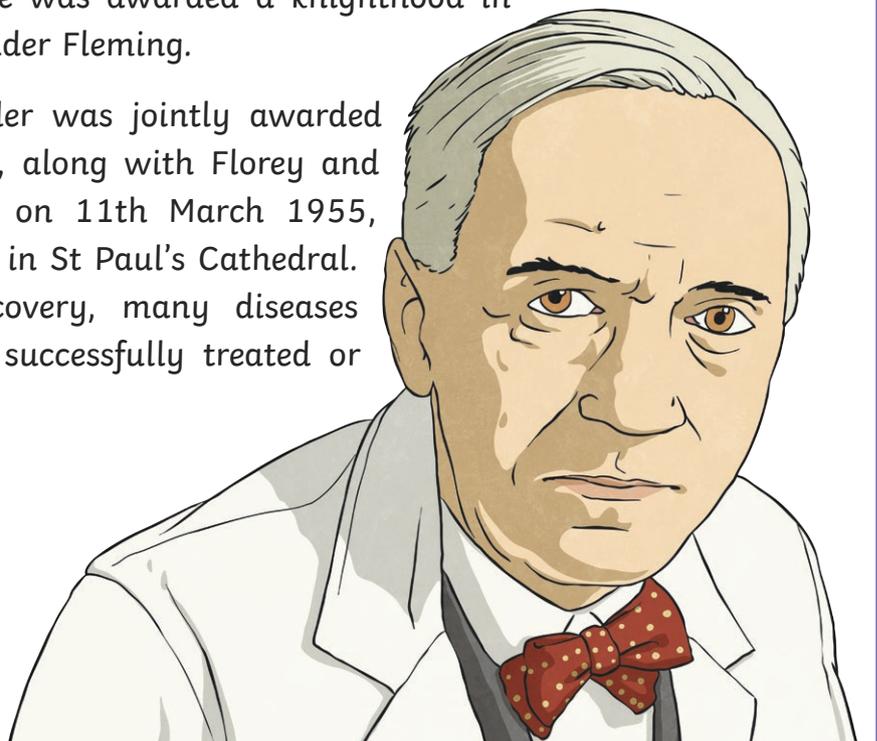
Some bacteria help us stay healthy, but some bacteria can also cause infection and disease. In France during the First World War, Fleming saw many soldiers die from infected wounds. As a result, he wanted to find antibacterial treatments.

In August 1928, Fleming left a petri dish of bacteria in his laboratory while he went on holiday. When he came back, he noticed that mould had grown on it. The bacteria had disappeared from the area around the mould. This was Fleming's breakthrough; the moment he realised that some antibacterial agent had stopped the bacteria growing. He later identified this antibacterial agent as penicillin.

In 1939, two scientists, Howard Florey and Ernst Chain, investigated how to reproduce Fleming's penicillin. Their work meant that penicillin could be produced in large amounts and that the first ever antibiotics were made. Infections such as meningitis and scarlet fever could now be treated and many bacterial infections were eliminated.

Fleming was thought of 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, along with 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, many diseases and infections have been successfully treated or completely eliminated.



Questions

Read the text carefully and answer the questions by completing the sentences below.

1. Where and when was Alexander Fleming born?

Alexander Fleming was born _____

2. What are bacteria?

Bacteria are _____

3. What was the name of the antibacterial agent that stopped bacteria growing?

The antibacterial agent that stopped bacteria growing was _____

4. Who continued Fleming's work on penicillin?

_____ continued Fleming's work on penicillin.

5. Why are we grateful for Alexander Fleming's discovery?

We are grateful for Alexander Fleming's discovery _____

Answers

1. Where and when was Alexander Fleming born?

Alexander Fleming was born **on 6th August 1881 near Darvel, Ayrshire.**

2. What are bacteria?

Bacteria are **simple, tiny living cells that help us stay healthy but can also cause infection and disease.**

3. What was the name of the antibacterial agent that stopped bacteria growing?

The antibacterial agent that stopped bacteria growing was **penicillin.**

4. Who continued Fleming's work on penicillin?

Howard Florey and Ernst Chain continued Fleming's work on penicillin.

5. Why are we grateful for Alexander Fleming's discovery?

We are grateful for Alexander Fleming's discovery because **some diseases and infections have been successfully treated or have been eliminated.**

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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.

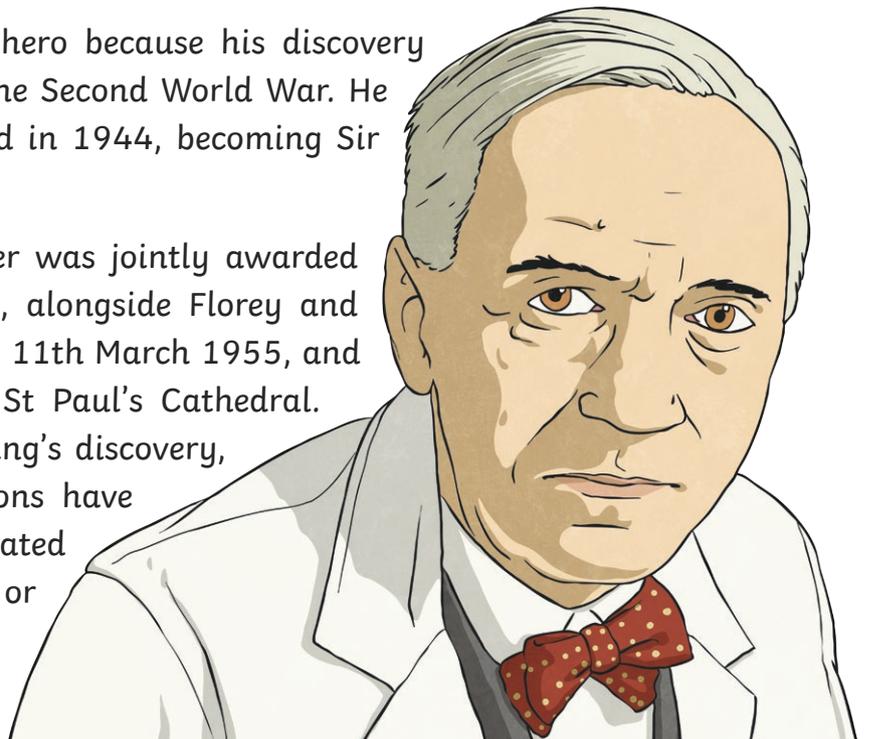
Some bacteria help us stay healthy, but some bacteria can also cause infection and disease. In France during the First World War, Fleming saw many soldiers die from infected wounds. As a result, he wanted to do more medical research to try to find antibacterial treatments.

In August 1928, Fleming left a petri dish of bacteria in his laboratory while he went on holiday. When he came back, he noticed that yellow-green mould had grown on it. The bacteria had disappeared from the area around the mould. This was Fleming's breakthrough; the moment he realised that some antibacterial agent had stopped the bacteria growing. He later identified this antibacterial agent as penicillin.

In 1939, two scientists, Howard Florey and Ernst Chain, investigated how to reproduce 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 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 Alexander Fleming's discovery, some diseases and infections have been successfully treated for almost 80 years, or completely eliminated.



Questions

Read the text carefully and answer the questions in sentences.

1. Where and when was Alexander Fleming born?

2. After studying medicine, what did Alexander Fleming go on to study?

3. Why did Fleming want to do more research into antibacterial treatments?

4. What did Fleming notice about a petri dish he had left in his laboratory?

5. What was the antibacterial agent he had discovered?

6. Who continued Fleming's work on penicillin?

7. From their work on penicillin, what could now be produced?

8. Why was Alexander Fleming's work so important in the past and today?

Answers

1. Where and when was Alexander Fleming born?
Alexander Fleming was born on 6th August 1881 near Darvel, Ayrshire.
2. After studying medicine, what did Alexander Fleming go on to study?
Fleming later went on to study simple, tiny living cells called bacteria.
3. Why did Fleming want to do more research into antibacterial treatments?
In France during The First World War, Fleming had seen many soldiers dying from infected wounds and wanted to do more research into antibacterial treatments.
4. What did Fleming notice about a petri dish he had left in his laboratory?
Fleming noticed that the area around the yellow-green mould was clear of bacteria.
5. What was the antibacterial agent he had discovered?
It was a form of penicillin.
6. Who continued Fleming's work on penicillin?
Two scientists called Howard Florey and Ernst Chain continued working on Fleming's penicillin.
7. From their work on penicillin, what could now be produced?
As a result of their work, the first ever antibiotics were made.
8. Why was Alexander Fleming's work so important in the past and today?
Thanks to Alexander Fleming's discovery, some diseases and infections have been successfully treated or eliminated for almost 80 years.

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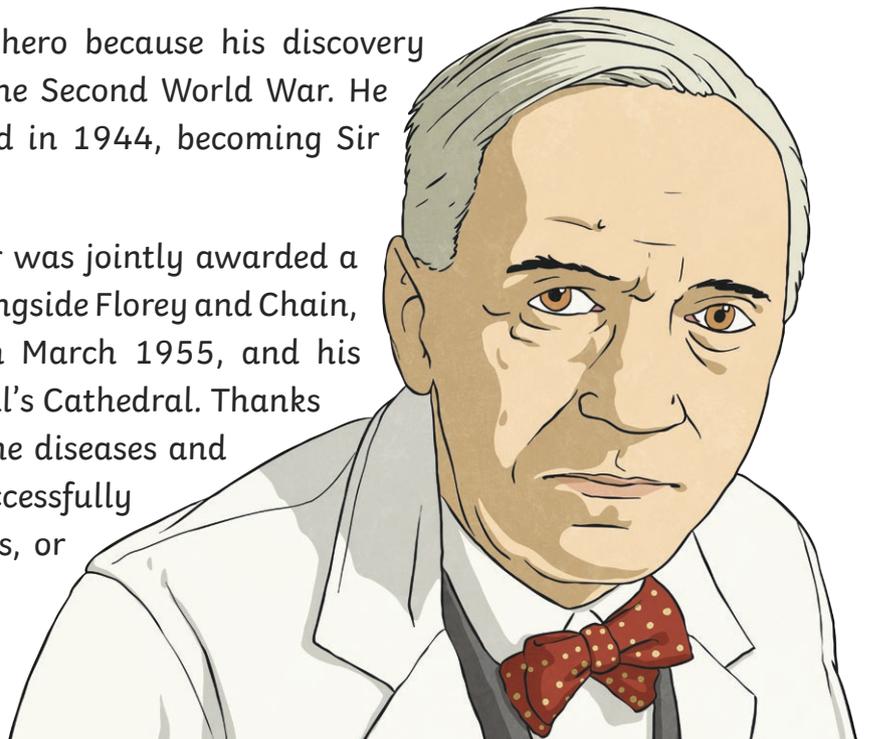
Some bacteria help us stay healthy, but some bacteria can also cause infection and disease. In France during the First World War, Fleming saw many soldiers die from infected wounds. As a result, he endeavoured to do more medical research to try to find antibacterial treatments.

In August 1928, Fleming left a petri dish of bacteria in his laboratory while he went on holiday. When he returned, he noticed that yellow-green mould had grown on it. The bacteria had disappeared from the area around the mould. This was Fleming's breakthrough; the moment he realised that some antibacterial agent had stopped the bacteria growing. He later identified this antibacterial agent as 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.

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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.



Questions

Read the text carefully and answer the questions in sentences.

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?

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 left a petri dish of bacteria in his laboratory while he went on holiday. When he returned, he noticed that yellow-green mould had grown on it. The bacteria has disappeared from the area around the mould. This was Fleming's breakthrough; the moment he realised that some antibacterial agent had stopped the bacteria growing. He later identified this antibacterial agent as penicillin.
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.