Alexander Fleming - Story Outline

As a young doctor in the First World War, Alexander Fleming discovered for himself that there was no effective way to treat many of the infections that the soldiers had from their wounds. He was certain that something could be found to stop these infections.

When he became a researcher at St Mary's hospital in London he continued to look for ways to kill off the bacteria that caused wounds to go septic.

Fleming was known to colleagues as being rather untidy, and in August 1928 when he went off on holiday his lab bench was in a mess. There were Petri dishes all over the bench, smeared with bacteria from his experiments.

When he returned a couple of weeks later he had to start by clearing up his lab. There are different stories about what happened next-

Story 1
Fleming looked at each dish before dropping it into the cleaning mixture in the sink. Suddenly—

Story 2
On his return Fleming had just pushed all the dishes into a sink of cleaning mixture. He then picked them up one at a time to scrub them. He picked up the top disc, which had not been in the cleaning mixture, and suddenly—

Story 3
On his return Fleming had pushed all the dishes into a sink of cleaning mixture. A visitor came into his room and asked him what he was working on. He picked up the top disc, which had not been in the cleaning mixture, to show the visitor when suddenly—

he realised that something very special had happened on the dish.

Fleming noticed that the plate had a pale yellow-green mould on it. The mould was in the shape of a ring and there was a clear area around it where the bacteria had stopped growing. He was very excited to see this because it was just the sort of effect that he had spent years looking for. Fleming spent the rest off the day going round showing off the plate to other researchers in rooms around him.

The spores of the penicillin mould had probably blown into Flemings room from one of the other labs in the hospital, and grown whilst he was away. The temperature had been just right for this to happen. Later on he realised how lucky he had been for this to happen. Fleming analysed the mould and found that it was a type called *penicillin*. He carried out experiments with *penicillin* and published them in scientific journals, but he was never able to make enough pure *penicillin* to treat wounds.

Eventually Fleming gave up and started doing other work, but his research paper was read by many other scientists. Eventually ten years later Howard Florey and Ernst Chain at Oxford University found a way to purify *penicillin*. They started by working with some of the *penicillin* mould that Fleming had grown. When it was tried on patients it had a dramatic effect and bacterial infections were healed very quickly.

In 1942 Professor Florey was able to persuade large drug companies in the USA to find ways to mass-produce *penicillin* . It became known as the 'wonder drug' in the Second World War and saved thousands of lives. Fleming, Florey and Chain were given the Nobel prize in 1945 for their work.