Hello class, today I am going to tell something about Alan Turing. I was wondering if any of you have ever heard of him before.

I am going to talk about his early life, the Turing Test, Enigma, his conviction and why I chose him as my VIP.

Early life

Alan Turing was the second child of Julius Mathison en Ethel Sara Turing. Julius worked for the Indian Civil Service and lived in India. There he met Ethel and later they got married. They had two sons: John and Alan. Alan was born in 1912.

Because their father lived in India, John and Alan grew up in foster homes. In these foster homes, creativity was discouraged. Alan was accepted to Sherborne School, a well-known boarding school. At this school he met Christopher Morcom in 1928. The boys were both very interested in science, mathematics and cryptanalysis. Cryptanalysis is deciphering coded messages with a few or sometimes no indications. Their friendship came to an end in 1930 because Christopher died. He had bovine tuberculosis. Turing coped with Christopher’s death by working really hard on their shared interests. He began wondering about the human spirit. This made him interested in physics.

Turing Test

He started studying mathematics in 1931 at King’s college, also known as the University of Cambridge. He studied there from 1931 to 1934.

In 1936, Turing published an article, "On Computable Numbers, with an Application to the Entscheidungsproblem". In this article he presented The Turing Test.

This test is based on the question: Can a computer talk like a human? Turing came up with a game; a human judge has a text conversation with players he can’t see. The judge writes down their responses. To pass the test, the computer must be able to replace one of the players without substantially changing the results. In other words: the computer will be considered intelligent if its conversation can’t be easily distinguished from a human’s.

The concept of the modern computers, as we know them, is partly based this article.

Enigma

During the Second World War, Alan worked for the British code breaking organisation at Bletchley Park. He concentrated on breaking the Enigma code.

The enigma machines were a series of [cipher machines](https://en.wikipedia.org/wiki/Rotor_machine). The machines are quite complex but I want to try and explain them.

The enigma machines have 26 normal keys and 26 lettered lights. When a key is pressed, a random letter lights up. If you put in a word, a cipher will come out. You sent the random letters to the receiver. The receiver can fill in these random letters and the actual word will come out. For instance the word hey. You put in the letters h-e-y and three random letters light up. In this case, w-s-x. We put in w-s-x and the letters h-e-y will light up. The Germans changed the settings every 24 hours. So if you cracked a code, the next day you would have to start over from scratch.

The United Kingdom was dependant on the food supplies from other allied countries. The Germans destroyed these ships. German submarines received their orders in Enigma codes. By deciphering the Enigma code, the British could foresee attacks. Alan came up with a machine called Bombe to decipher the codes sent out by the Germans. This machine worked and by the end of the war, the United Kingdom used over 200 Bombes. Alan’s invention has saved millions of lives.

Conviction

In January 1952, Turing, then 39, had a relationship with Arnold Murray. Homosexual relationships were forbidden in the United Kingdom at that time. Alan Turing was convicted for indecency. Turing could choose between probation or hormonal treatment. He chose hormonal treatment and underwent chemical castration for a year. This made him impotent and caused breast forming.

In 1954, he was found dead by his housekeeper. He died of cyanide poisoning. An apple was found next to his body but during the autopsy, no apple parts were found.

His death may have been an accident. Turing wasn’t very careful with cyanide. He stored dangerous chemicals very poorly.

Some people think he was killed by the government because of his work during the Second World War.

In 2009, a petition was started for the British government to apologise for Alan’s conviction. The Queen officially pronounced Turing pardoned in August 2014.

Motivation

I have chosen Alan Turing as my VIP because he has saved millions of lives. Too bad not many people know him and his work. The first time I came across his name, I was reading an article about Ada Lovelace, a mathematician who came up with the first mechanical computer. Later on, I watched a movie about Alan Turing called the Imitation Game with Benedict Cumberbatch as the leading role.

Alan Turing is also seen as a founding father of the computer. Without his inventions and theories, computers could have been very different or they didn’t exist.

Thank you for listening