KS2 Alan Turing Assembly/Lesson Slides

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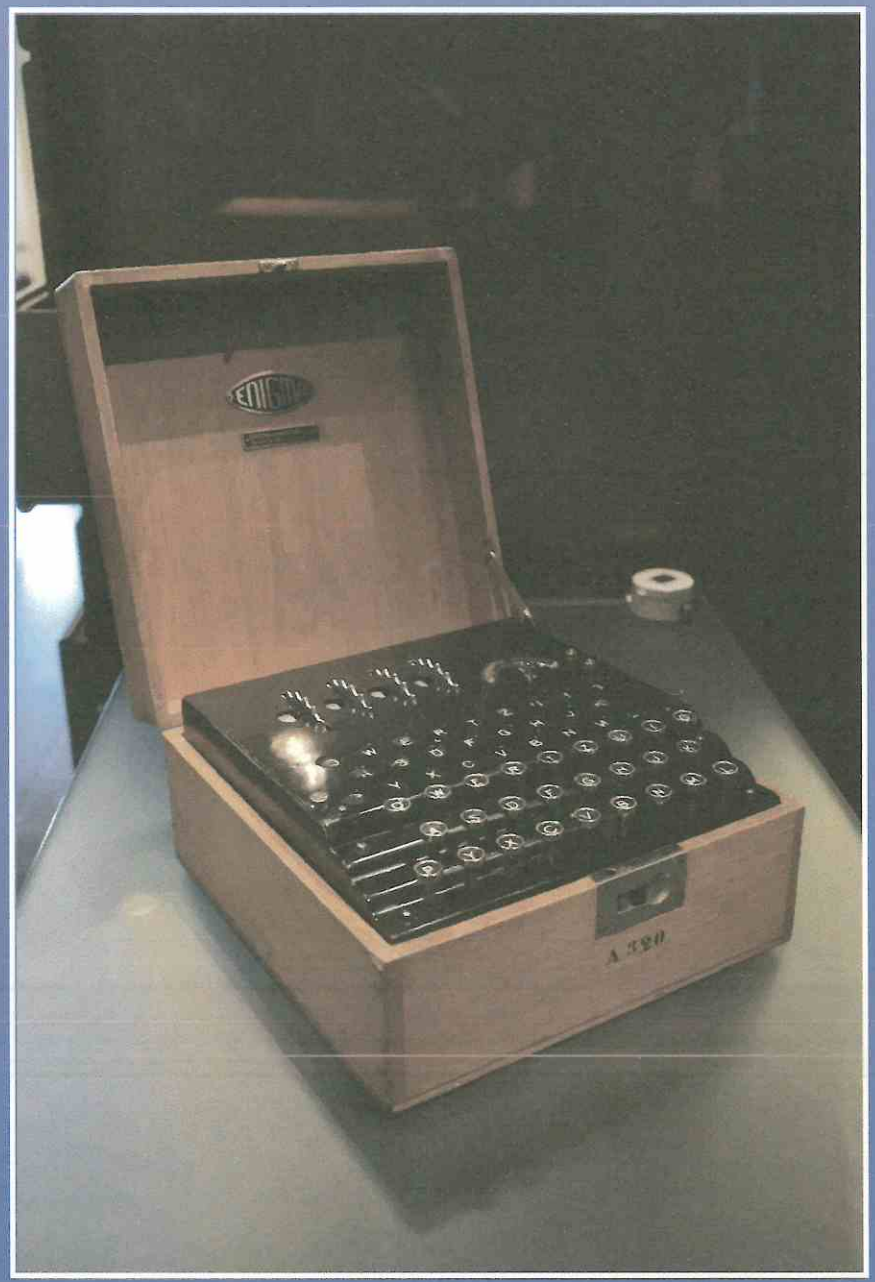
Key Points:
- This Assembly/Lesson Focuses on Alan Turing - a maths and computing genius.
- Despite Alan's brilliance, being gay was illegal in his lifetime and he was treated like a criminal.

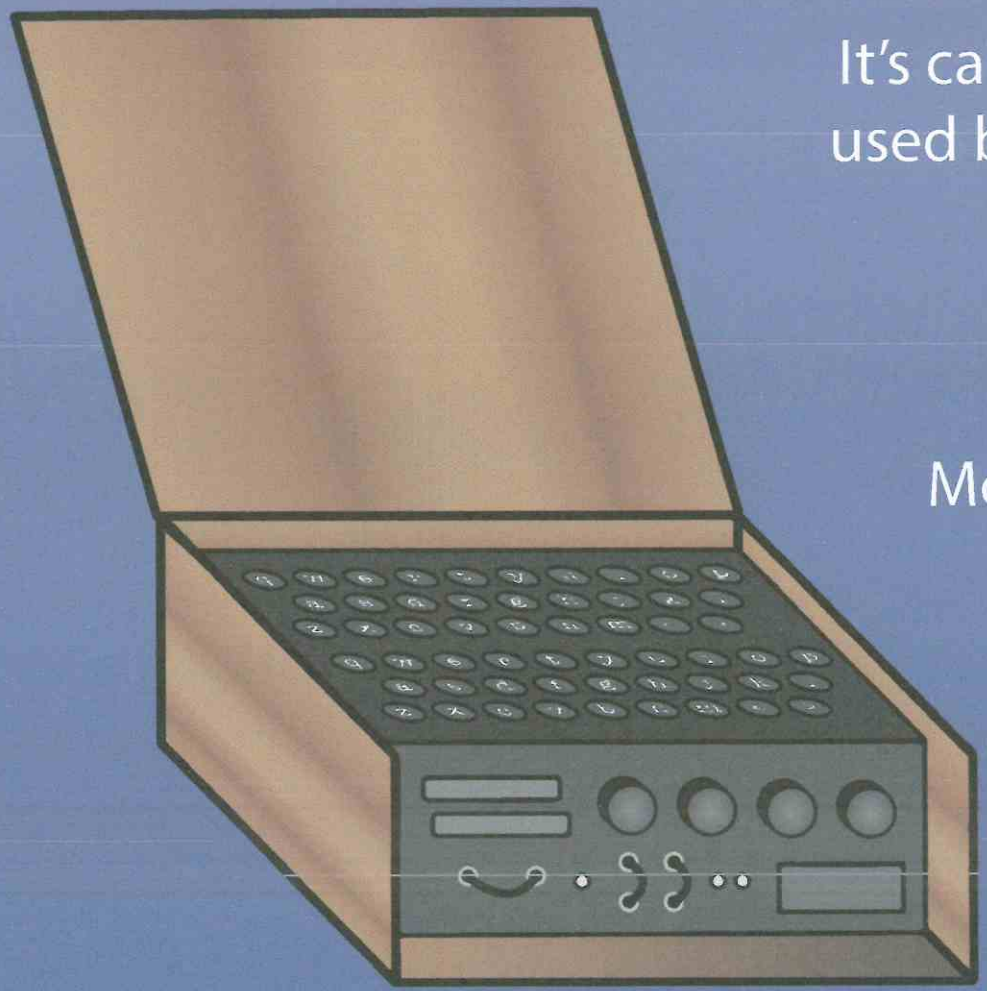
Instructions:
The slides are self-explanatory.



Have you ever seen this machine before?

Can you guess what it was used for?

If you thought it was for sending messages, you're right.



It's called an Enigma Machine and it was used by the Nazis in World War 2 in order to send coded messages.

It was a very clever invention. Most people thought it was impossible to crack the codes it generated.

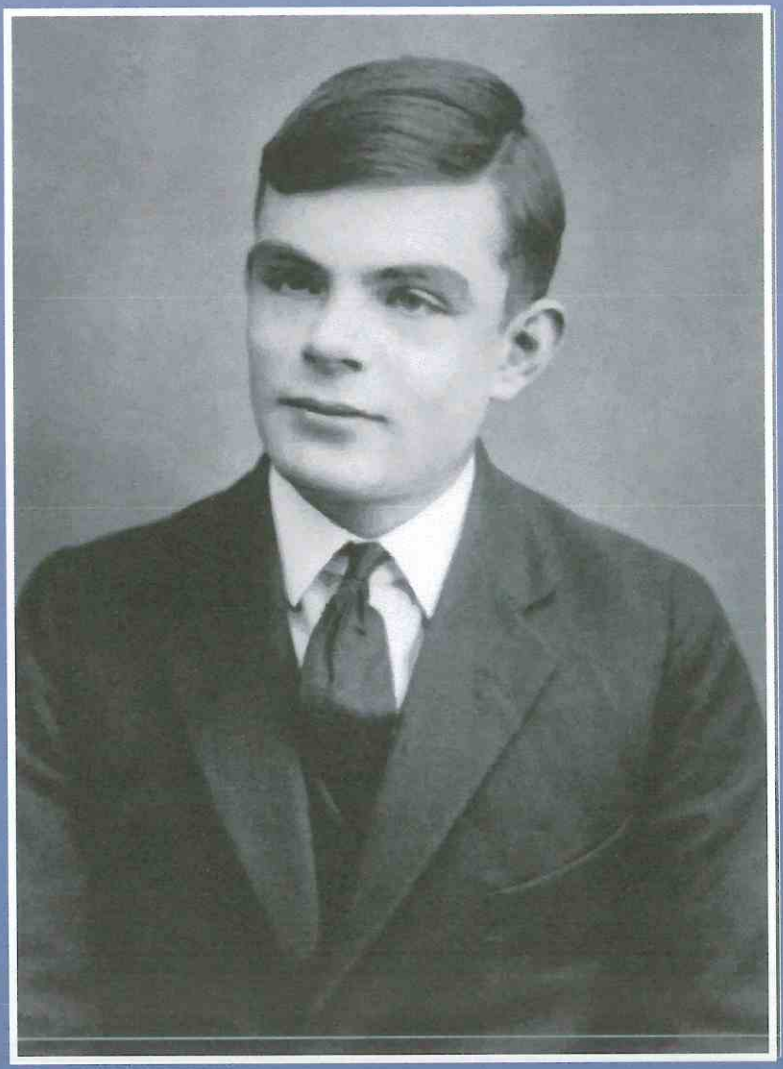
But one person was able to...

This person was a man called Alan Turing.

Alan was born in London in 1912.

He was a natural genius. His brilliant understanding of maths and science started when he was just a child.

However, Alan's secondary school didn't focus on these subjects, so he decided to study them himself.

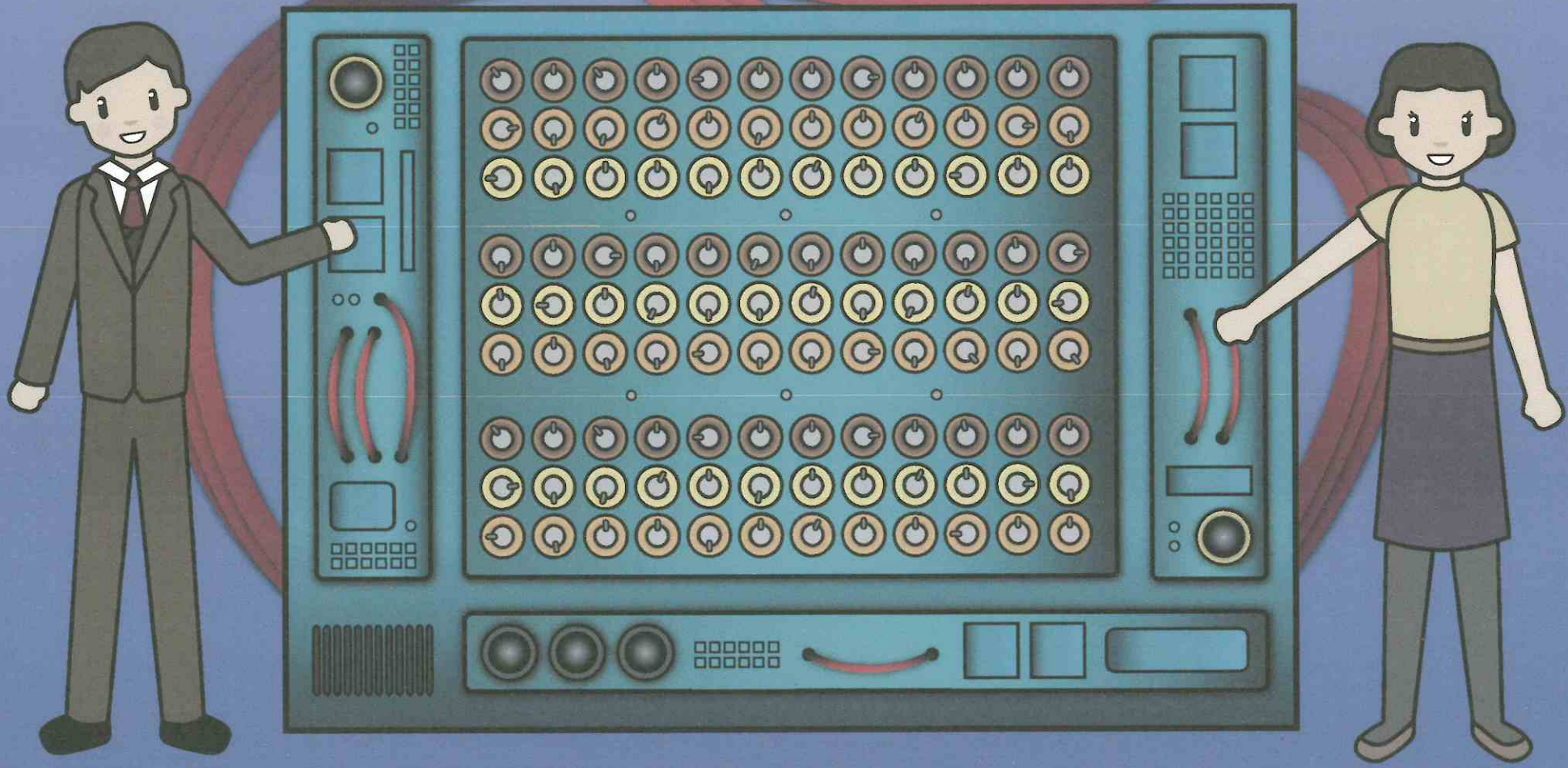


Alan was also an excellent runner, but it was his love of patterns, chess and solving problems that led him to Bletchley Park...

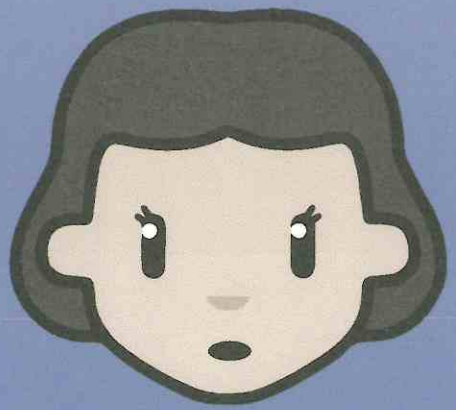
Bletchley Park was a secret government location where a team of expert code-breakers (men and women) worked long hours trying to find ways of cracking enemy codes to help shorten (and ultimately win) the Second World War.

Shhhhhhh!

This operation was a secret. Nobody talked about what happened here – even for many years after the war had finished.

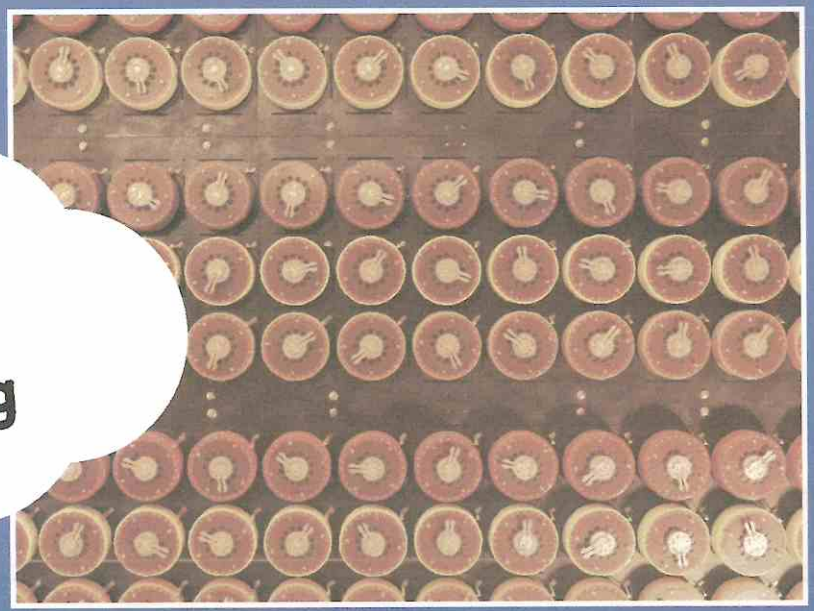


Whilst at Bletchley Park Alan designed a brilliant (and highly complex) machine that could decode the enemy's secret messages. Alan called it 'The Bombe' and it was operated mostly by women.



It was very dull, repetitive work. We worked long hours in dark and stuffy rooms. I was always very tired!

What do you think it felt like to spend hours every day doing this work?



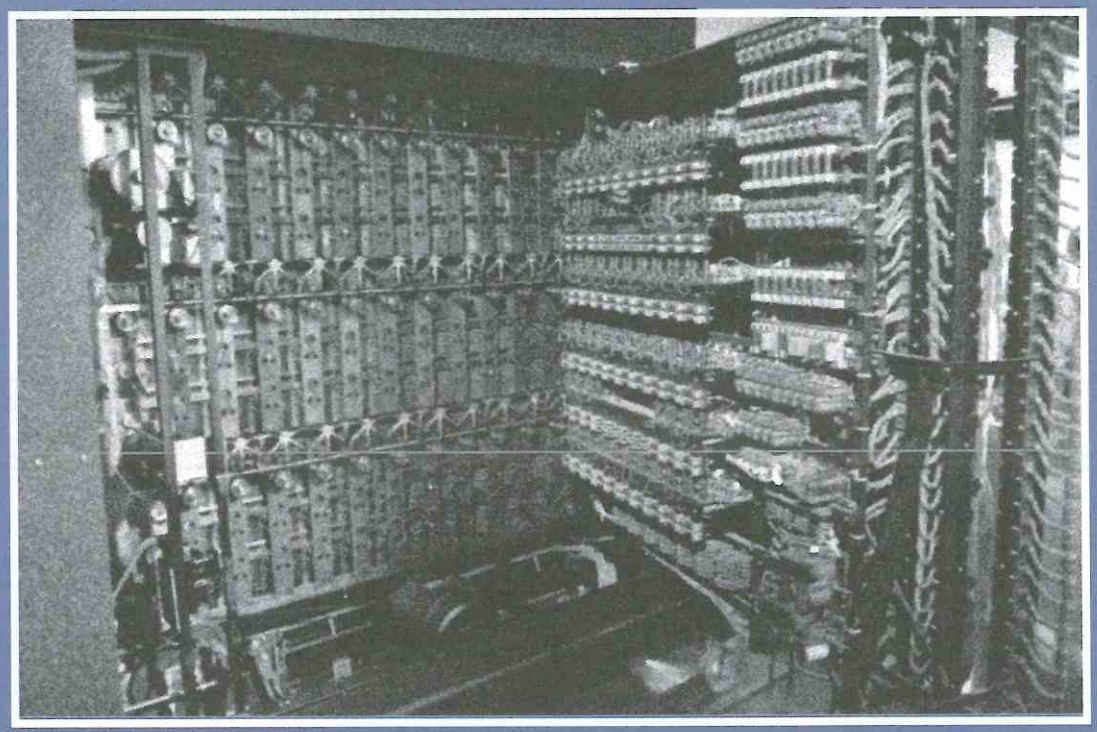
Thanks to his machine, Alan and his team of code-breakers were able to decode enemy messages.

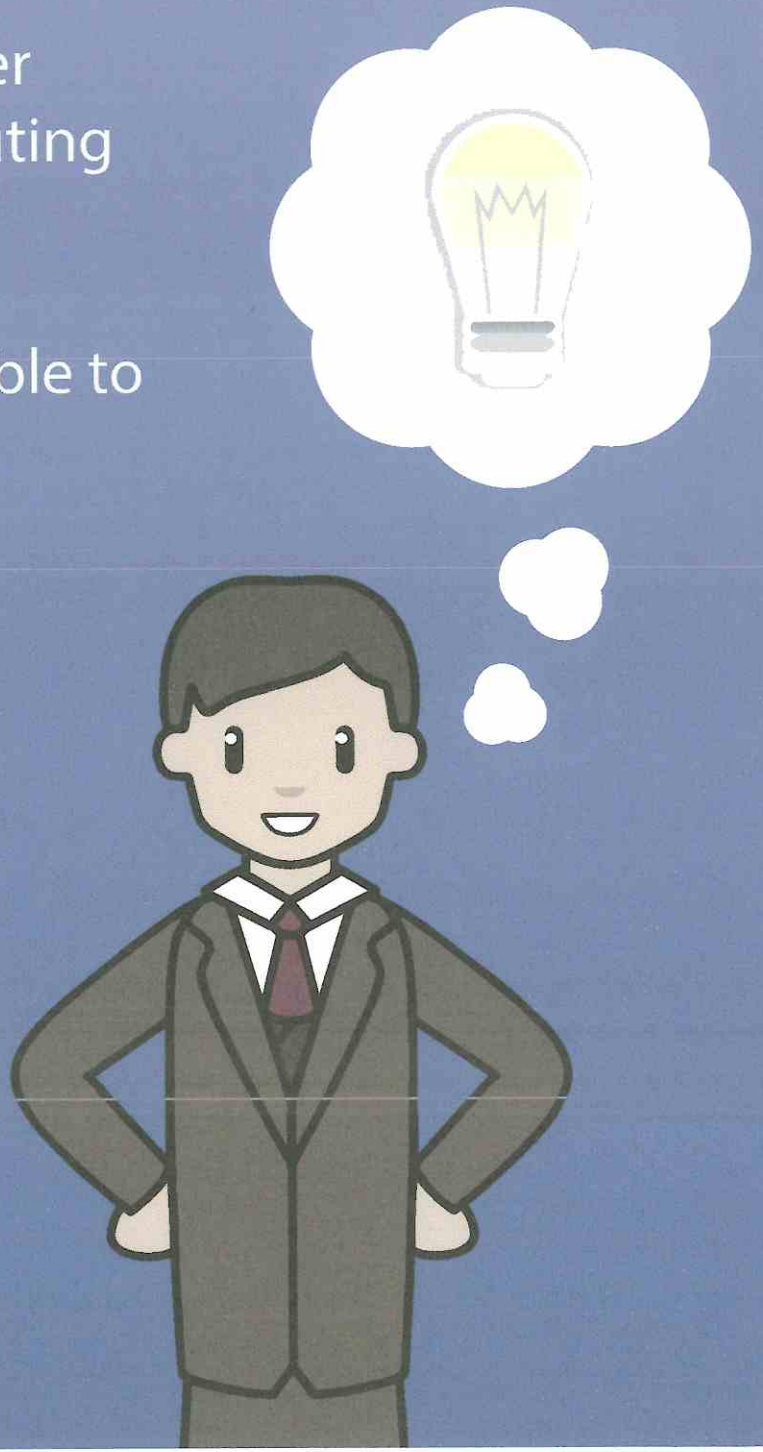
They were able to pass on important information about the enemy's strategies, plans and movements.

By cracking the codes, it is estimated that the war was shortened by two years and that millions of lives were saved!

After the war, Alan continued to work on other machines. He invented the Automatic Computing Engine, or 'ACE' for short.

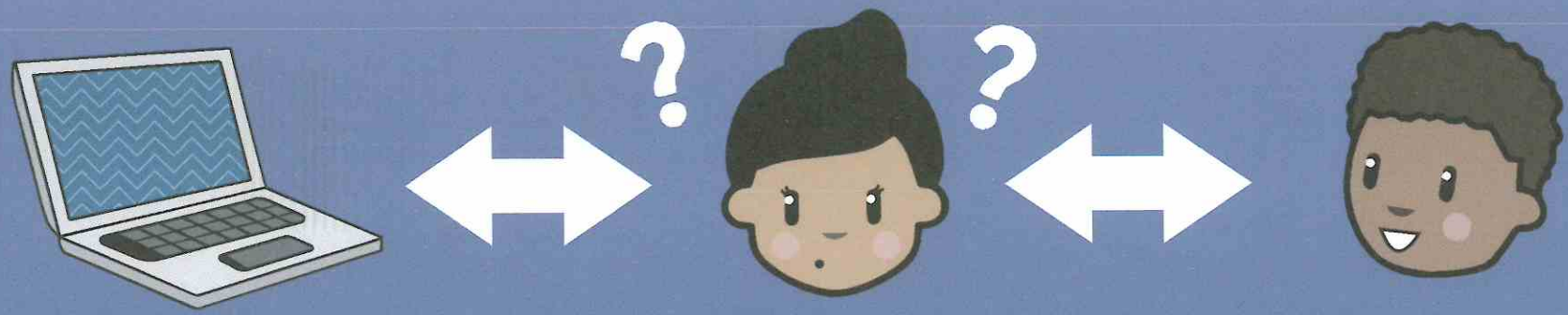
The ACE was the very first digital computer, able to solve problems and store information in its memory.





Alan also invented a test for working out if a machine could really 'think'...

A machine and a person are hidden in different rooms. Another person has a typed 'conversation' with both of them, asking them the same questions. If the questioner can't work out which one is the machine and which one is the human then Alan said that it proves the machine is 'intelligent' and can 'think'.



Alan called it the Imitation Game, but we know it as The Turing Test.

But people can't seem to agree. Some say we do have intelligent machines who can 'think' and others say we aren't quite there yet.

What do you think?

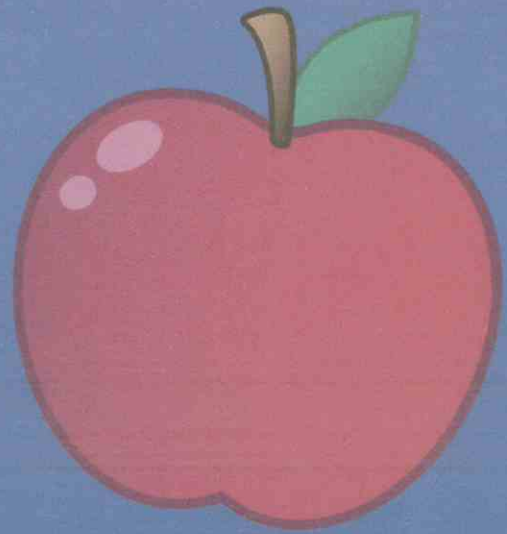
Unfortunately, things went terribly wrong for Alan in the early 1950s.

Alan was gay at a time when this was illegal in the UK. In 1952 he was taken to court and given a terrible choice. He could either go to prison or have a medical treatment designed to stop his romantic feelings.

How do you think Alan felt about this terrible choice?

We know that being gay is just another way of being a human and that it is not something we can (or should try to) change, but in the 1950s people sadly hadn't realised this yet.

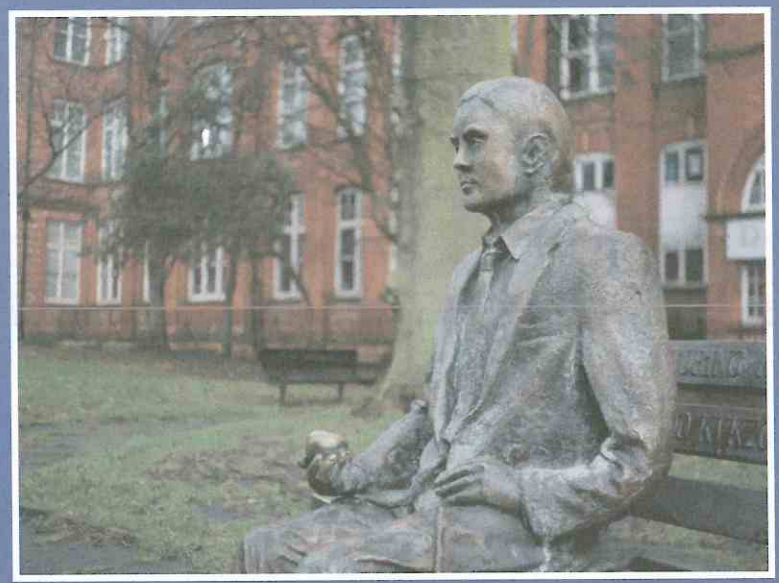
Alan didn't want to go to prison so he chose the medical treatment, but this made him feel terrible. In the end it made him feel so bad that he made the tragic decision to take a bite of an apple, that he had laced with poison, in order to end his own life.



In 2009 the British Government recognised that Alan Turing had been treated appallingly and made an official apology.

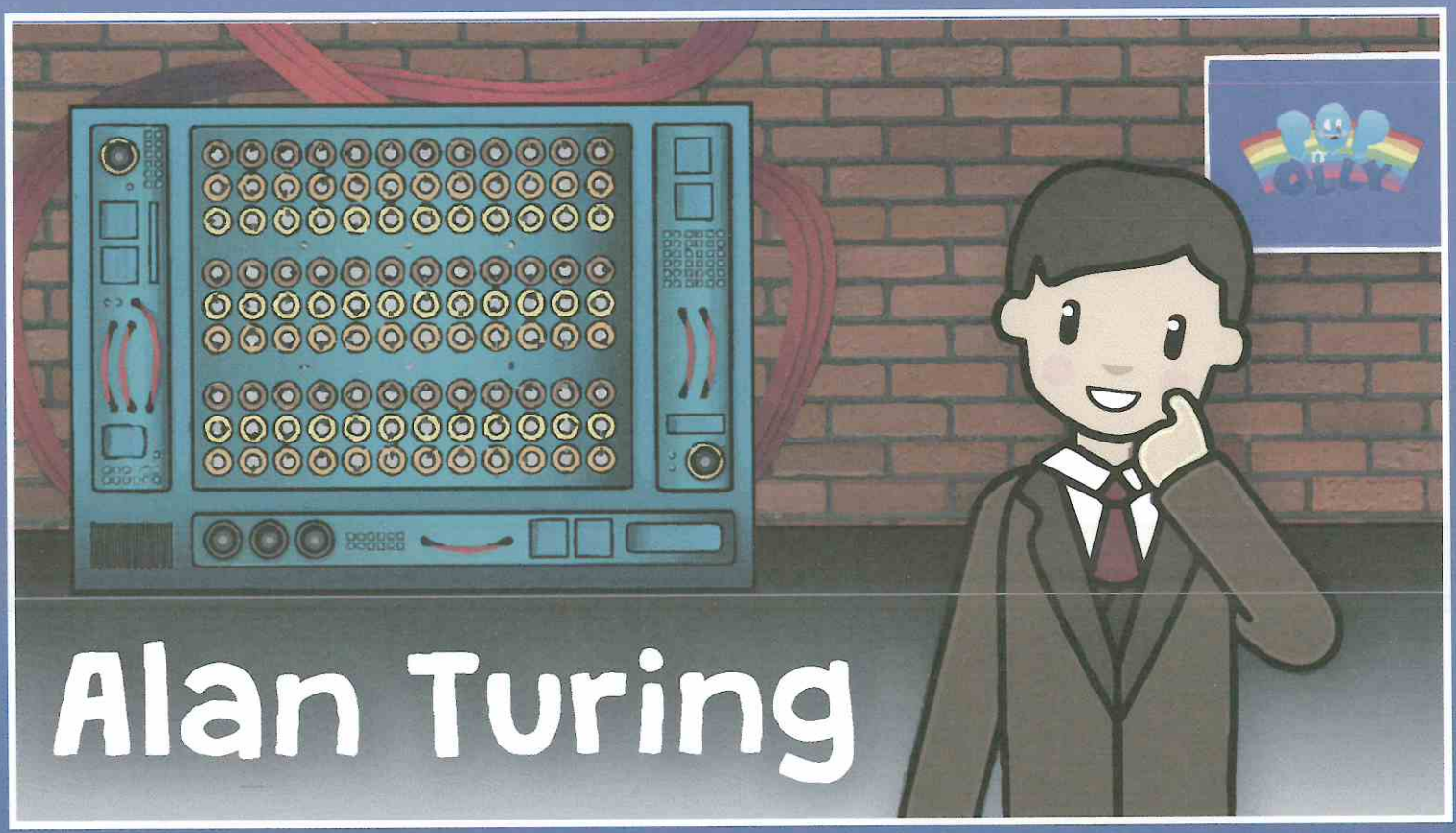
In 2010 The Equality Act was introduced - a law that protects all gay people from discrimination and unfair treatment.

Today, Alan is praised as a true hero for his help during World War 2. He appears on the Bank of England's £50 note, statues of him have been built and awards have been named after him.



Time to Watch...

Now would be a really great time to watch our video about Alan Turing in order to learn even more about him and his story. You can find this video at youtube.com/popnolly.



Quiz Time!

1. What subjects were Alan particularly good at?

2. What was the name of the machine that the enemies used to send messages?

3. How many lives do people estimate were saved by the war ending early?

4. What year was Alan arrested?

5. What can we do to make sure people aren't treated unfairly like Alan was?

6. Do we already have any laws in place that would help?

Quiz Answers

1. Maths and Science (and he loved patterns, chess and problem solving)

2. Enigma Machine

3. Millions of lives

4. 1952

5. Treat people fairly; stick up for people. (You might have other ideas too)

6. The Equality Act 2010