

Key Vocabulary

acrostic code	A code where the first letter of each word, line or paragraph spells a message.
brute force hacking	When a hacker uses different types of methods, such as trial and error, to crack entry into secured information.
chip and pin system	A payment system to buy securely where a bank card has a chip in it protected by a Personal Identification Number (PIN).
cipher	Information written in a secret way.
encrypt	Converting information/data into secret code to avoid unauthorised access.
invention	New device/process that solves a problem.
trial and error	Test a method and if it fails, try another method. Continue this until successful.

Secure Passwords

Brute force hacking uses trial and error to guess passwords. Simple passwords are quicker to hack.



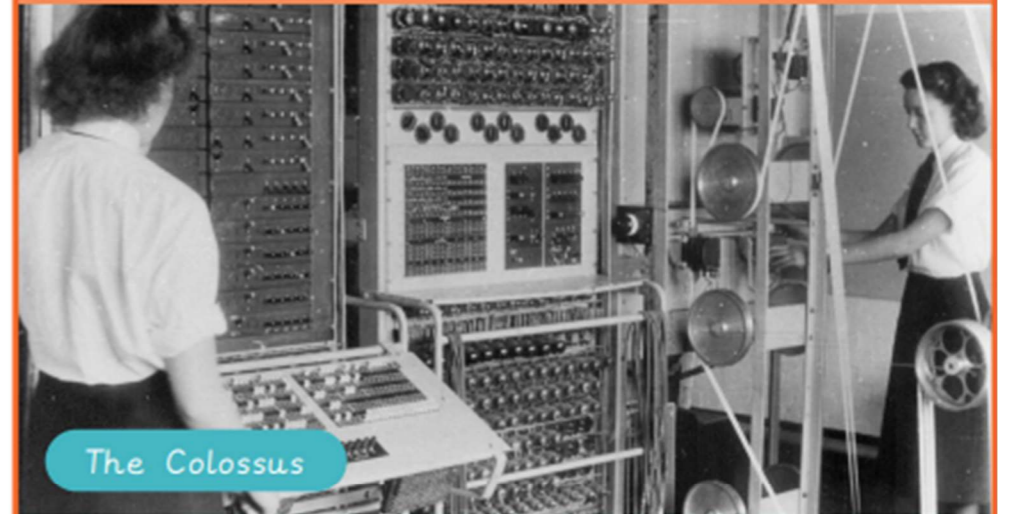
Working Systematically:

1 <sup>st</sup> attempt	0	0	0
2 <sup>nd</sup> attempt	0	0	1
3 <sup>rd</sup> attempt	0	0	2
4 <sup>th</sup> attempt	0	0	3
5 <sup>th</sup> attempt	0	0	4
6 <sup>th</sup> attempt	0	0	5
7 <sup>th</sup> attempt	0	0	6
8 <sup>th</sup> attempt	0	0	7
9 <sup>th</sup> attempt	0	0	8
10 <sup>th</sup> attempt	0	0	9
11 <sup>th</sup> attempt	0	1	0
12 <sup>th</sup> attempt	0	1	1

Key Facts

Over 10,000 people worked for Bletchley Park. Over 75% of the workers were women.

In 1943, the Colossus computer was constructed by codebreakers during World War II. This enormous machine was the world's first electronic programmable computer. It took hours rather than days and weeks to crack encrypted messages to help win the war.



The Colossus

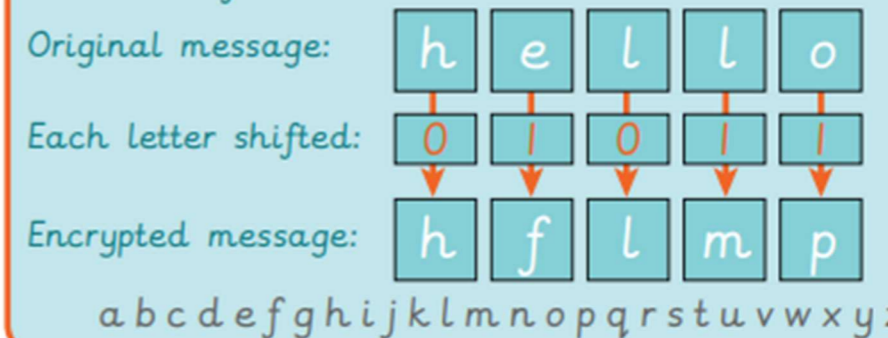
Enemy messages, which were encrypted, had to be written down on paper. Then they were sent over to Bletchley Park, often by motorbike.

Example:  
Date shift cipher:



Visual representation:

Date used to encrypt the message: 1st January 1984  
In number format this would read: 01 01 1984



Historical Figures



Alan Turing

He helped to create the first computer.

Born 23 June 1912

Died 7 June 1954 (aged 41)

Within two weeks of arriving at Bletchley Park during World War Two, Turing created a machine called the 'bombe'. This was a more effective automated way to break Enigma-encrypted messages.

The first bombe was installed on 18 March 1940.

Turing was never fully recognised in Britain during his lifetime because much of his work was covered by the Official Secrets Act

Other historical computing heroes

Ada Lovelace	Wrote the first ever computer code.
Bill Gates and Paul Allen	Co-founders of Microsoft, who created Windows, Microsoft Office and XBOX.
Steve Jobs and Steve Wozniak	Co-founders of Apple, who created Mac computers, iPads and iPhones.
Sir Tim Berners-Lee	Invented the World Wide Web (WWW).
Larry Page and Sergey Brin	Inventers of Google.
Dabbala Rajagopal 'Raj' Reddy	Pioneer of Artificial Intelligence (AI).
Gladys West	Helped invent the Global Positioning System (GPS).