

Year 6 Autumn 1 Computing – Bletchley Park



Big Question

Why is Bletchley Park significant?

Key Vocabulary for the unit:

Acrostic Code: A type of code where the first letter of each word, line, or paragraph when put together spells a message.

Brute force hacking: When someone, known as a hacker, uses different types of methods, such as trial and error, to crack entry into secured information.

Caesar cipher: A way in which every letter is replaced with another letter in a fixed number of places down the alphabet.

Chip and pin system: A payment system to buy something securely.

Cipher: Information that is written in a secret way, also known as a code.

Date Shift Cipher: A code derived from the date that tells you how many spaces to move each of the letters in the coded message.

Encrypt: Converting information/data into a secret code or message, to avoid unauthorised access.

Nth letter Cipher: A type of code where you choose the Nth letter of the text /code again and again until the text ends.

Pigpen Cipher: A substitution code, where letters are exchanged for symbols, which are parts of specific grid.

Powerful knowledge/skills for this unit:

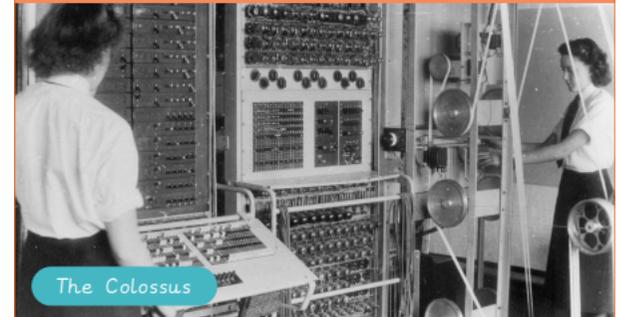
- ◆ To understand the importance of having a secure password and what “brute force hacking” is.
- ◆ To know that the first computers were created at Bletchley Park to crack the Enigma code to help the war effort in World War 2.
- ◆ To know about some of the historical figures that contributed to technological advances in computing.
- ◆ To understand what techniques are required to create a presentation using appropriate software.

What I should already know from Year 5:

- ◆ To know how search engines work.
- ◆ To understand that anyone can create a website and therefore we should take steps to check the validity of websites.
- ◆ To know that web crawlers are computer programs that crawl through the internet.
- ◆ To understand what copyright is.

Useful diagrams for the unit:

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

Original message:

h	e	l	l	o
---	---	---	---	---

Each letter shifted:

o	i	o	i	i
---	---	---	---	---

Encrypted message:

h	f	l	m	p
---	---	---	---	---

Network: When a person is accessing the internet through an electronic.