What do we explore in this unit?

Exploring code-breaking at Bletchley Park, historical figures in computing, the evolution of computers, designing a computer of the future and creating an audio advert.
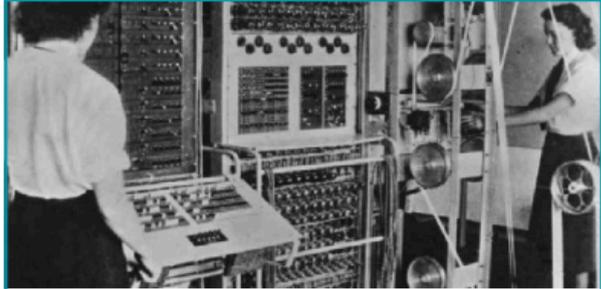

Z3 (1941): German engineer Konrad Zuse created the world's first working, programmable, fully automatic, digital computer.

Apple 1 (1976): one of the first personal computers that helped to launch the personal computing revolution.

IBM PC (1981): set the standard for personal computers and led to their widespread adoption in homes and businesses.

How did we crack the German codes?

The Colossus

Codebreakers during World War 2 constructed the Colossus computer in 1943. This enormous machine was the world's first electronic, programmable computer.

Date shift cipher

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:	0	1	0	1	1
Encrypted message:	h	f	l	m	p

a b c d e f g h i j k l m n o p q r s t u v w x y z

Who will we find out about?

acrostic code	A type of code where the first letter of each word, line or paragraph spells out a hidden message.
audio advert	An advert for a product using only sound recordings that might be heard on radio or podcasts.
background noise	A (secondary) sound that is not the focus beacuse there is another primary sound.
brute force hacking	When a hacker uses different methods, such as trial and error, to break into secured information.
chip and PIN system	A secure payment system where a plastic bank card (like a debit or credit card) has a chip that the card owner can access by entering a personal identification number (PIN).
cipher	A way of writing information in a secret code.
CPU (central processing unit)	The brain of the computer that processes all the data from input and output devices and runs the programs on the computer.
password	A unique mix of letters, numbers or symbols used to protect personal information online.
trial and error	Trying different methods to solve a problem until one works.

Who will we find out about?

Ada Lovelace was a mathematician known for her work on Charles Babbage's early computer, the Analytical Engine.

Tim Berners-Lee invented the World Wide Web.

Steve Jobs co-founded Apple Inc. and was a key figure in the personal computing revolution.