



05 – Cracking the Code

Teachers' Notes

What techniques do code breakers use?

Find out how British cryptographers deciphered the German messages. Learn different techniques to decipher code, and translate a message from German. Work as a team, against the clock, to find and decode secret messages in your school.

Background information

- Colossus was fast but humans were needed to operate the machines and finish the deciphering process.
- The British noticed that important messages sometimes started or ended with the same words e.g. "Adolf Hitler, Führer". This provided clues to work out the rest of the message.
- Other clues include letter frequency, looking for letter patterns and double letters.

Learning outcomes

- Use different techniques to decipher code.
- Appreciate time pressure by racing to crack the code.
- Understand that encrypted messages were translated from German.

Key words

Intercept | Decipher | Translate

Prepare for the activity

- Prepare film clip.
- Download classroom PowerPoint.
- Print activity sheets.

- Read Teachers' Clue Sheet to prepare the team challenge.

Run the activity

- Show the film clip.
- Use the PowerPoint to introduce key words, describe code-breaking techniques and explain messages were translated from German.
- Give the students time to do Activity 01 and crack the code.
- The encoded message translates to: "I am wounded I need help".

Secret decoder team challenge

- Read the Teachers' Clue Sheet.
- Follow the instructions to set up the Decoder challenge.
- Remind students this is a Top Secret operation.
- The four mystery words are: **Engineer, Dollis Hill, Colossus** and **Lorenz**.
- Top tip: Start each team with a clue for a different location.

Extension activities

- Use a stop watch to time how long it takes each team to complete the task.
- Use the key to write more difficult clues or help students to write their own.

