Codebreaking at Bletchley Park

World War II was fought between 1939 and 1945. The Allied powers were Britain, France, Russia and America. They fought the Germans, Italians and Japanese. The Allied forces won the war.

Messages were sent by the Germans to their army and navy using radio. To help make it hard for the Allies to read these messages, they used codes. The codes were encoded using machines such as the Enigma machine.

Bletchley Park in Buckinghamshire

The Government Code and Cypher School at Bletchley Park worked on methods to let the Allied forces to decipher the codes used to keep the German communications secret. This produced vital intelligence to help Allied military operations on land, at sea and in the air. Bletchley Park also led to the birth of the information age, with the machines used leading to the development of modern computers.

The Enigma Machine

The Enigma machine was very complex. It used a series of rotors to encode messages in a way that made them very hard to read. At the start of World War II the machines had 3 rotors. This meant that there were 158,962,555,217,826,360,000 different settings for each letter.

The Germans changed the rotor positions used every day. This meant that breaking these codes by hand was nearly impossible. And even if they were broken, they would need to be broken again the following day.

A German Enigma machine

Activity 1:
a) What happened at Bletchley Park during World War II? Why was this important?
b) What was the Enigma machine used for?
c) How many settings for each letter were there on an Enigma machine? Why did this cause a problem for the Allies?
d) What else made it hard to crack the German codes?
e) Describe what the Enigma machine looks like