SELF-LED ACTIVITY

RANGE, ROUTES AND RADAR

KS3

Recommended for

KS3 (History, Science, Maths)

Learning objectives

- Understand how radar was used to discover the location of ships and how ships were targeted with guns.
- Understand the role of the Battery Observation Post and how it controlled the guns on the Half-Moon Battery during the Second World War.

Time to complete

30 minutes

One of the 6 inch guns in the Half Moon Battery.

SUMMARY

This activity helps students to understand how enemy ships were targeted from the Battery Observation Post (BOP).

Start with an explanation of how radar was used to reveal the position of enemy ships. Radio waves were sent out into the sea and bounced back when they encountered a ship. This information was then recorded on a map as coordinates.

The soldiers in the BOP sent the gunners in the Half Moon Battery two sets of coordinates for aiming their fire; one outside range and the other inside range. The guns were set to fire at the predicted position (the second set of coordinates) and were fired just as the enemy boats arrived at the outside range position.

Using the information below, students can use the equation: distance = speed x time to answer the questions.

A German E boat is sighted travelling due south towards Pendennis at **24 metres per second**.

The soldiers in the Battery Observation Post send the gunners in the Half Moon Battery two sets of coordinates:

1. Out of range: when the boat reaches here, the guns are fired.

2. In range: the position where the shell will impact the boat.

The BOP gives the in range co-ordinates **192 metres** due south of the out of range position. When the boat passes the out of range position, the guns at Half Moon are fired and the shell impacts and sinks the boat at the in range position. How many seconds does it take for the shell to hit the boat?

The shell travelled **6,768 metres** before it impacted the E boat. How many meters per second does the shell travel?

MORE LEARNING IDEAS

Students can create their own maps of coordinates and work with a partner to play a 'Battleships'.