



## Learning notes

### Bearings in the real-world

Linked Article: [Maths in a Cold climate](#)

The Maths in a Cold climate article explores life as a Land Surveyor - in particular measuring parts of the Antarctic peninsula.

To know where they were on the ice, and to find the exact spot where the depots of food and supplies were- with very few recognisable landmarks – the Antarctic explorers used bearings.

There are many professions that require knowledge and use of bearings for navigation. The resources below allow students to explore some of them.

#### Learning Task:

You may wish to use the MEP's [Angles, Bearings and Maps](#) resources first if your students haven't seen bearings before.

Mysteries of the deep Earth resource is a series of lessons that ask students to complete a variety of tasks based on real-life situations to support a scientific research vessel on its journey exploring another extreme climate- submerged volcanoes.

In the first lesson covering bearings, students are asked to imagine that they are a modern day scientist about to embark on a journey on board the research vessel:

"You are the navigator on the voyage. The scientists have told you a number of key sites where they want to collect data and have marked them on the map.

Calculate the bearings and distances that you will have travel on at each point in voyage so you can tell the captain where to sail. The voyage will set sail from Cairns and finish in Brisbane."

The objective of this lesson is for students to apply their knowledge of bearings to a real-world navigation scenario. Students will be required to measure bearings and, if they reach the extension activity, construct bearings.

The complete collection- including presentations and student worksheets- can be found [here](#). Topics covered include coordinates, estimation, conversion of units and negative numbers.

#### Take your learning further:

The [bearings resources](#) from Defence Dynamics students work as the Operations Team for a Royal Air Force (RAF) squadron on Quick Reaction Alert (QRA).

Presented with a series of imaginary scenarios, students have to review and plan routes for a number of aircraft facing different crises.

The lesson aims to help the development of a range of different skills such as varying scale maps, distances, bearings and aircraft speeds.

#### Take your learning further still:

Further bearings practice can be found in this [resource](#) from the Royal Observatory Greenwich, in which students use bearings to plot constellations.

#### To find out more:

More bearings lesson can be found in our [Measuring Lines, Angles and using Scale drawings](#) collection.