Magnetic patterns: ocean floor pattern plotting

Learning objectives:

- the Earth's magnetic field has 'flipped' (the N pole becoming the S pole, and *vice versa*) many times over geological time
- as **tectonic plates** move apart, new rock is formed and locks in the direction of the magnetic field at the time

Timing: about 20 minutes

Introduction:

Students use magnetic field data and a map of the ocean floor around Iceland to observe how the direction of magnetisation of the ocean floor varies. This links the magnetization of rocks with the theory of **tectonic plates**.

Students tackle the worksheet *Magnetic patterns: ocean floor pattern plotting.*

There are two closely related activities which teachers might wish to tackle at the same time. These are:

- *Magnetic stripes on the ocean floor: a lab simulation*: teacher demonstration
- *The plate tectonic story: a scientific jigsaw*: comprehension exercise