Moving plates (3)

Plates moving away from each other

Where plates move apart, magma rises to the surface. This usually happens under the oceans. As the molten rock sets, a ridge forms. An example is the mid-Atlantic Ridge. Iceland is part of the mid-Atlantic Ridge. Islands are made when the new rock builds up above the level of the sea.

Sea floor spreading

You have already seen how the continents were once joined together. Studies of the ocean floor have given us more evidence that some plates are moving apart.

The rocks at the ridge contain a lot of iron compounds. As you know, iron is magnetic. Its atoms line up when the molten rock sets on the sea bed. They point towards the North Pole.

However, every few hundred thousand years, the Earth’s magnetic field is reversed. The South Pole becomes magnetic north. The rocks on the sea floor show when these changes happened.

Look at the bands of rock in the diagrams:

They give us evidence that the sea floor is spreading. In fact, each year you have to travel about an extra 2 cm to get to America!