

## Test yourself

### Plate tectonics

The world map below shows the plates and plate borders of Earth.

1. Use coloured pencils and a key to indicate the different types of plate borders on the map.

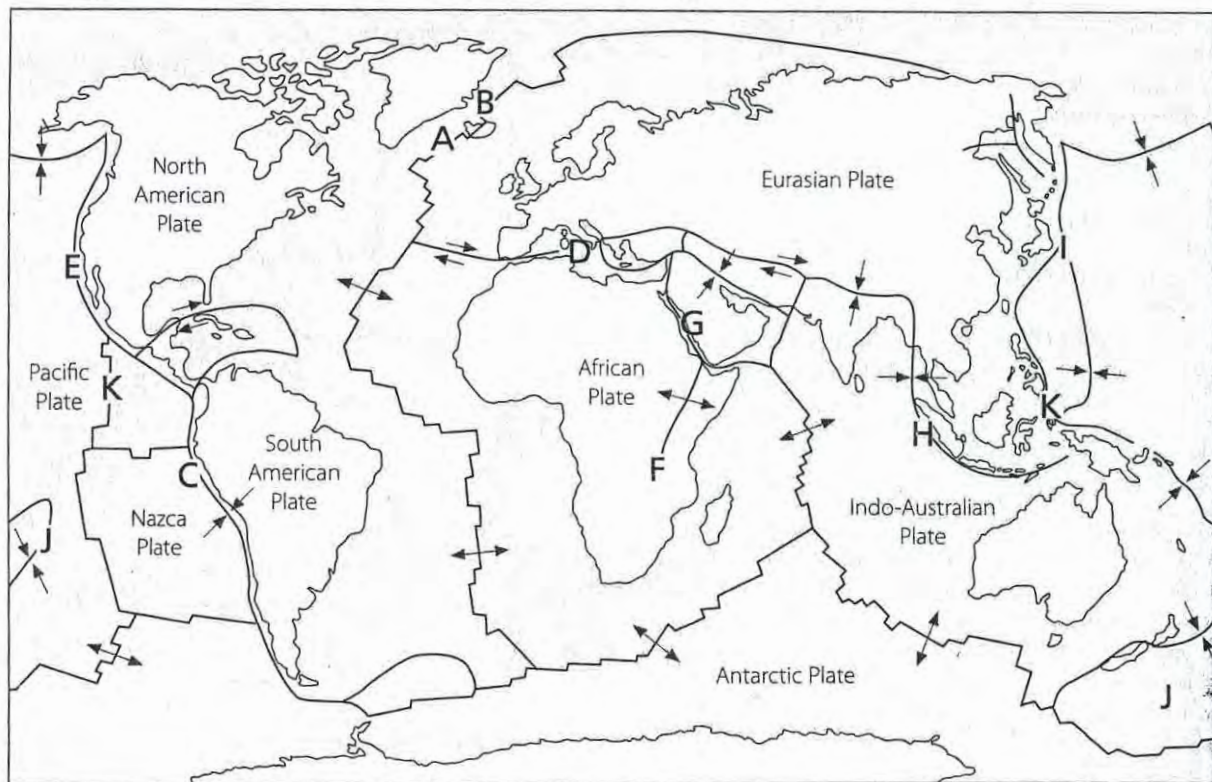


Figure 3.15 The plates and plate borders of the Earth

2. The text below gives information on the areas that are marked with letters on the map. Complete the missing words/phrases. An atlas will help you to find the answers.

- The island of Surtsey was born in 1963 when a volcano erupted in the North Atlantic Ocean. This occurred at the \_\_\_\_\_ Ridge, which is an \_\_\_\_\_ and constructive zone, with \_\_\_\_\_ plate borders. (3)
- Iceland is growing by about 2 cm a year due to two plates moving away from one another. This has caused a \_\_\_\_\_ across Iceland. This is an \_\_\_\_\_ zone with \_\_\_\_\_ plate borders. (3)
- South America is on the \_\_\_\_\_ Plate, which is sliding westwards and meeting the Nazca Plate, which is sliding \_\_\_\_\_. The Nazca Plate is subducting into the mantle forming a trench and the \_\_\_\_\_ mountains. These are \_\_\_\_\_ mountains that have formed on the western side of the continent. This is an \_\_\_\_\_ and subduction zone with \_\_\_\_\_ plate borders. (6)
- Another example of the collision of plates is that of the \_\_\_\_\_ plate, which is moving northwards and meeting the Eurasian plate. This is slowly closing the \_\_\_\_\_ Sea. (2)
- The San Andreas Fault is created by the \_\_\_\_\_ Plate, carrying a sliver of California, moving northwards in relation to the \_\_\_\_\_ plate, which is carrying the rest of California. This is an example of a \_\_\_\_\_ plate border as two plates grind past one another. (3)

- f. This is the \_\_\_\_\_ where two plates are moving away from one another. (1)
- g. Sea-floor spreading is causing the Red Sea to become wider. This an \_\_\_\_\_ zone with \_\_\_\_\_ plate borders. (2)
- h. There are many unstable zones in the east. The earthquakes and tsunamis that occurred in Indonesia in December 2004 were a result of the \_\_\_\_\_ Plate moving in a northeasterly direction and meeting the Eurasian plate. This is a subduction area and \_\_\_\_\_ zone. The plate borders are \_\_\_\_\_ as two plates are moving towards one another. (3)
- i. Many earthquakes and volcanoes occur in Japan, which lies on the edge of a plate. Here the \_\_\_\_\_ Plate is meeting the \_\_\_\_\_ Plate. These are \_\_\_\_\_ plate borders as plates are moving towards one another. (3)
- j. \_\_\_\_\_ also lies at the edge of two plates, and experiences earthquakes and volcanoes. (1)
- k. The area around the Pacific Ocean is called the \_\_\_\_\_, as this area is associated with the movement of plates and there are many earthquakes and volcanoes. (1)
3. Correct the following statement:  
The crust is composed of molten magma and can therefore move on the rigid mantle beneath it. (4)
4. Choose the description from Column A that matches the term/phrase in Column B: (16)

A	B
a. Boundary between the crust and mantle	1. Converging plates
b. Large ocean 250 million years ago	2. Magma coming out of Earth's surface
c. Large southern continent 180 million years ago	3. Moho Discontinuity
d. Subduction zone	4. Stable part of the crust
e. Mid-oceanic ridge	5. Laurasia
f. Intrusion	6. Panthalassa
g. Craton	7. Rock becomes molten as it is pulled into the crust
h. Extrusion	8. Diverging plates
	9. Gondwanaland
	10. Pangaea

[48 marks]