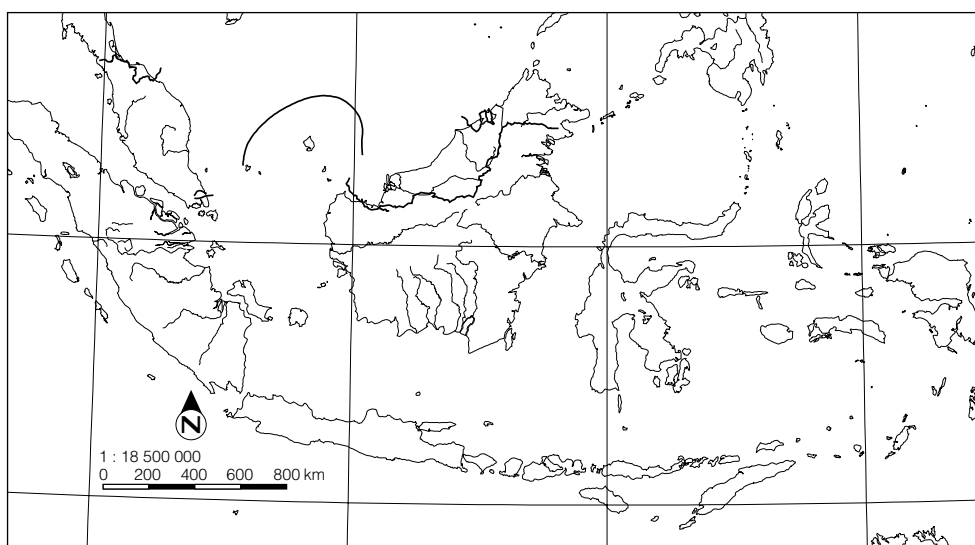


**DATELINE:** 4 June 2000. A powerful earthquake measuring 7.9 on the Richter scale and lasting for several minutes was recorded off the coast of the Indonesian island of Sumatra. The epicentre was 33 km below the earth's surface, about 112 km south west of Bengkulu, and 536 km west-northwest of Jakarta. The main tremor was felt in Jakarta and as far north as Singapore. At least 103 people were killed by falling debris and thousands were made homeless. Electricity failure and road collapses have made rescue efforts difficult. Although seismologists feared a tsunami because of the shallowness of the epicentre, this has not occurred. Indonesia, the world's largest archipelago nation, lies on major fault lines with high risk of seismic upheavals.

1. (a) Using the outline map of Indonesia below and page 144-145 of the *Jacaranda Atlas* mark on the following place names: **Sumatra, Java, Bengkulu, Jakarta, Singapore, Indian Ocean.**



- (b) Use the map on page 9 of the *Jacaranda Atlas* to label the tectonic plates that meet along the Indonesian archipelago.
- (c) Use the scale on the outline map to estimate the location of the epicentre of the earthquake and mark with a green circle.

- (d) Use the scale on the map on page 144 of the *Jacaranda Atlas* to estimate the distance from Bengkulu to Jakarta and Singapore. \_\_\_\_\_
2. Use the information in the dateline above and on pages 153 and 137 of the *Jacaranda Atlas* to fill in the table below comparing this earthquake with those in Kobe and Napier.

Earthquake location	Sumatra	Kobe	Napier
Date of occurrence			
Duration of earthquake			
Richter scale measurement			
Fatalities			
Type of damage			

3. Using the information and the diagrams on page 9 and 153 of the *Jacaranda Atlas*, add the following labels to the appropriate blank diagrams to explain the nature of an earthquake: **fault line, crust, mantle, epicentre, focus, strongest shock wave, weakest shock wave.**

