

Where do Earthquakes Occur?

Look at the map. Earthquakes happen frequently in these areas.
What do you notice about where they happen?

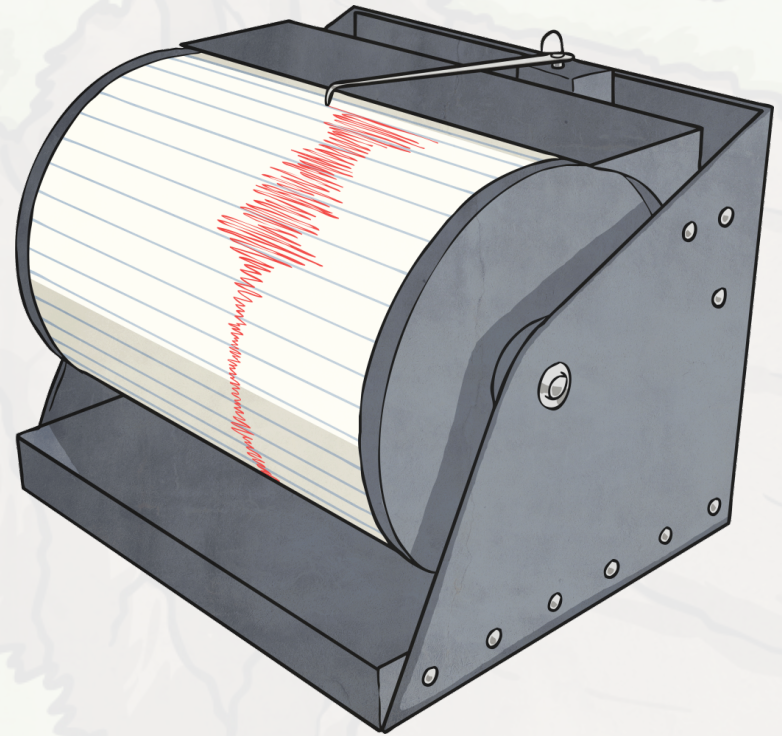


How Strong Is It?

There are two main ways to measure the power of an earthquake.

Machines called seismographs measure the power of an earthquake at its epicentre on a scale called the **Richter Scale**.

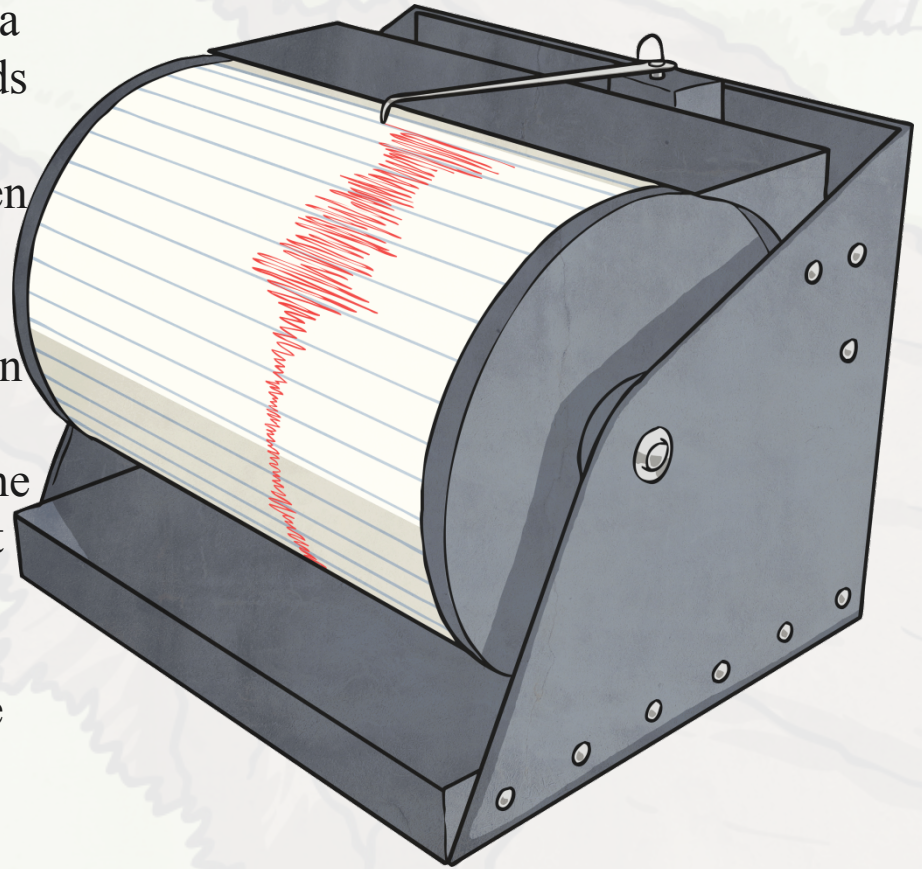
Another measure is the **Mercalli Scale**, and this is based on people's observations during an earthquake.



How Strong Is It?

Seismograph

A seismograph (say: size-mo-graf) is a special piece of equipment that records earthquakes. Seismometers are securely fastened to the Earth, so when the ground starts to shake, the instrument's case moves too. What doesn't move is a weight that hangs on a string inside the case. When there is an earthquake, the case shakes with the ground but the weight does not, and it draws a line to show how much the ground shook. Scientists use seismograms (graphs produced by the seismograph) to measure how big an earthquake is.



Comparing Earthquakes on the Mercalli Scale

Mercalli Intensity	Effect
I	Felt by no one.
II	Felt by very few people. Hanging objects may swing.
III	Felt by many but they don't realise it is an earthquake.
IV	Felt indoors by most people. Vibrations similar to a lorry hitting a building.
V	Felt by nearly everyone. Sleeping people may be woken. Trees and telegraph poles sway.
VI	Felt by all. People run outside. Furniture moves. Slight damage to property.
VII	Felt by all. People run outside. Moderate damage to buildings
VIII	Specially designed buildings damaged, others collapse.
IX	All buildings damaged. Cracks appear in ground.
X	Many buildings destroyed.
XI	Almost all buildings destroyed. Wide cracks in the ground. Water, gas and electric out of action.
XII	Total destruction. The ground moves in waves or ripples.

Earthquakes Around the World

Your Task

1. Study the 'Plotting Earthquakes' table of information. It shows where major earthquakes have occurred that measured an enormous 8 or 9 on the Richter Scale.
2. Print out the table and the World Map (in colour or black and white). First, mark on the Ring of Fire with a red pen. Next, mark the locations of these 12 earthquakes as it is shown on the 'Answers' sheet. Use the 'Answers' sheet to help you find the continent and the country.
3. Go on the internet to locate these major earthquake countries that are in 'The Ring of Fire.' We subscribe to **digimap for schools**. This is a fantastic online resource. Click on: <https://digimapforschools.edina.ac.uk>

Username: **PR29GA**

Password: **screds8378**

Enter the country in the search box in the top left-hand corner. Are the countries inland or on the coast? Are they very close to the Pacific Ocean? Zoom out using the minus button in the top right-hand corner. This will show you where the country is in the world. Have fun exploring!