



# How does the earth shake, rattle and roll?

## Knowing More, Remembering More

### Remembering previous learning:

**What is a continent?** A continent is a collection of countries.

**What is under the sea?** Sea animals and fish, lots of water, the sea bed, coral reefs.

**What are the points of the compass?** North, East, South, West

**What high places are in the world?** Mountains

**What are the 7 continents?** North America, South America, Asia, Africa, Europe, Antarctica, Australia  
Oceania

**What are the 5 oceans?** Pacific, Atlantic, Arctic, Indian, Southern

### In this unit children will...

- describe and understand the key aspects of volcanoes and earthquakes
- understand that the distribution of earthquakes and volcanoes follows a pattern
- be introduced to plate tectonics.
- learn about the 'Pacific Ring of Fire'.

### Key Learning Steps:

1. What is happening when the Earth shakes?
2. What is happening when the Earth rattles and rolls?
3. Does the Earth shake, rattle and roll all over?
4. How and why do people live where the Earth shakes rattles and rolls?
5. How disastrous have recent earthquakes and/or volcanic eruptions been?
6. Can we make a model volcano that erupts?

### Key Vocabulary:

active	Ecuador	plate boundary
advantages	environmental	Pompeii
ash plume	eruption	Popocatepetl
caldera	extinct	pressure
cone	hazard	Quechuan
converge	Iceland	Richter Scale
core	Italy	'Ring of Fire'
Cotopaxi	Iztaccihuatl	risk
crater	Japan	rock strata
crust	Java and Sumatra	social
danger	(both Indonesia)	tectonic plate
disadvantages	lava	tectonics
diverge	magnitude	Tigua
dormant	mantle	tsunami
Earth	Mexico	vent

### Key Geographers and Inspirational People:



Charles Francis Richter



John Mitchell



Dr Keith Yearwood

## Knowing More, Remembering More

### Knowing more in Y4

**What is an earthquake?** When the ground shakes, destroying towns, cities and landscapes.

**How are earthquakes caused?** When tectonic plates under the earth move against each other.

**Where have some earthquakes occurred?** Russia, Japan

**What causes volcanoes?** Tectonic plates move against each other and create heat. Molten lava comes out through the cracks. This can be gentle or explosive.

**Where have some volcanoes occurred?** Java and Sumatra (both Indonesia), Philippines, Mid-Atlantic Ridge, Iceland

**Where are earthquakes and volcanoes distributed?** Around the edges of tectonic plates.

**What are the three phases of volcanoes?** Volcanoes can be active, dormant and extinct.

**What is the 'Pacific Ring of Fire'?** An area in the Pacific where there is lots of volcanic eruptions.

**Why do people live near volcanoes?** Minerals e.g. tin, silver, gold, copper and even diamonds; Energy from underground steam (known as 'geothermal energy') used to make electricity; Fertile soils; Tourism.

**What are the hazards for people who live in earthquake and volcanic zones?** People are at risk of destruction of their homes, loss of electricity, buildings collapsing.