

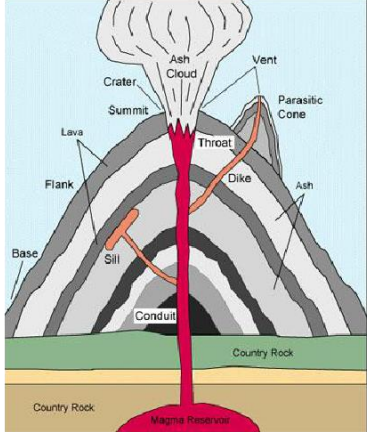
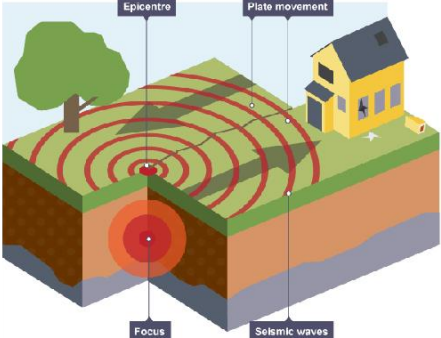
## Knowledge Organiser for Year 3

### Topic: Volcanoes and Earthquakes

#### Key questions:

- How are volcanoes formed?
- How are earthquakes caused?
- Where are some of the world's most famous volcanoes and earthquakes?

#### Key facts and figures

How are volcanoes formed?	<ol style="list-style-type: none"> <li>1. Magma rises through cracks or weaknesses in the Earth's crust.</li> <li>2. Pressure builds up inside the Earth.</li> <li>3. When this pressure is released, e.g. as a result of plate movement, magma explodes to the surface causing a volcanic eruption.</li> <li>4. The lava from the eruption cools to form new crust.</li> <li>5. Over time, after several eruptions, the rock builds up and a volcano forms.</li> </ol>	
What causes an earthquake?	<p>An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics). Earthquakes can happen along any type of plate boundary. Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other and sometimes get stuck. When this happens pressure builds up. When this pressure is eventually released, an earthquake tends to occur.</p>	
Where are some of the world's most famous volcanoes?	<ul style="list-style-type: none"> <li>• Mount Vesuvius, near Naples, Italy</li> <li>• Krakatoa, Indonesia</li> <li>• Mount St. Helens, Washington, USA</li> </ul>	<ul style="list-style-type: none"> <li>• Mount Tambora, Indonesia</li> <li>• Mauna Loa, Hawaii</li> <li>• Krakatoa, Indonesia</li> <li>• Santiago Island, Ecuador</li> </ul>

#### Did you know...?

- The word **volcano** originally comes from the name of the Roman god of fire, Vulcan.
- The object with the most **volcanic** activity in our solar system is Io, one of Jupiter's moons. Covered in volcanoes, its surface is constantly changing due to the large amount of volcanic activity.
- **Volcanic** eruptions can send ash high into the air, over 30km (17 miles) above the Earth's surface.
- Pumice is a unique **volcanic** rock (igneous) that can float in water.
- Scientists use the different speeds of seismic waves to locate the epicentre (the point on the surface directly above where the **earthquake** originated) of earthquakes.
- The most powerful **earthquake** ever recorded on Earth was in Valdivia, Chile. Occurring in 1960, it had a magnitude of 9.5.

#### Key vocabulary

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Volcano</li> <li>• Magma</li> <li>• Lava</li> <li>• Crater</li> <li>• Earth's crust <ul style="list-style-type: none"> <li>• Eruption</li> </ul> </li> <li>• Main vent</li> </ul> | <ul style="list-style-type: none"> <li>• Earthquake</li> <li>• Earth's plates</li> <li>• Plate tectonics</li> <li>• Epicentre</li> <li>• Vibration</li> <li>• Seismic waves</li> </ul> |
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**Part 1: Circle one correct answer for each question**

**1. A volcano is full of:**

- a) water
- b) lava
- c) trees
- d) air

**2. Lava is:**

- a) Water inside the volcano
- b) The air surrounding a volcano
- c) The name of the magma when it comes out of the volcano
- d) A worm

**3. Volcanoes form when:**

- a) A gap forms between two tectonic plates
- b) When it is hot weather
- c) There is a full moon
- d) When there is an earthquake

**4. An earthquake is caused by:**

- a) Elephants stampeding
- b) Meteorites hitting the Earth
- c) No one knows why
- d) Tectonic plates bumping against each other

**5. The Christchurch earthquake happened in:**

- a) Britain
- b) New Zealand
- c) Australia
- d) China

**6. Some earthquakes can cause:**

- a) Tsunamis
- b) Mud slides
- c) Meteorites
- d) Answers a and b

**Part 2: Complete these sentences:**

- 7. **The Ring of Fire** is in the \_\_\_\_\_ Ocean.
- 8. The place where an earthquake started is called the \_\_\_\_\_.
- 9. Two of the Earth's layers are called \_\_\_\_\_ and \_\_\_\_\_.

Total marks (out of 10 )start of unit \_\_\_\_\_end of unit \_\_\_\_\_