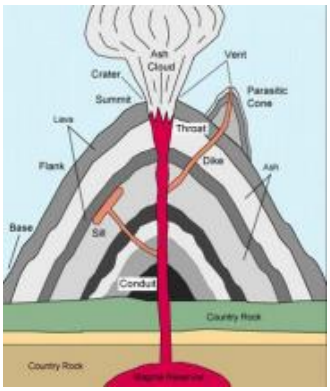
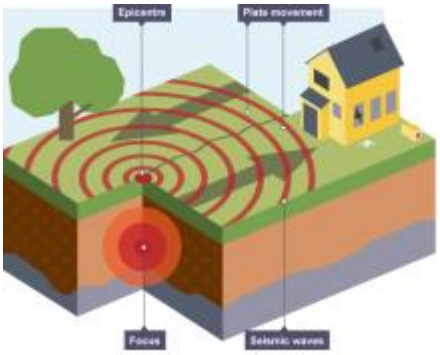
Jeavons Wood Primary School

Knowledge Organiser for Year 3 – Volcanoes and Earthquakes

Big question: How are volcanoes formed?

National curriculum specification
• Physical geography including volcanoes and earthquakes.





Key facts/figures	
How are volcanoes formed?	1. Magma rises through cracks or weaknesses in the Earth's crust. 2. Pressure builds up inside the Earth. 3. When this pressure is released, e.g. as a result of plate movement, magma explodes to the surface causing a volcanic eruption. 4. The lava from the eruption cools to form new crust. 5. Over time, after several eruptions, the rock builds up and a volcano forms
What causes an earthquake?	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.
Famous volcanoes	• Mount Vesuvius, near Naples, Italy • Krakatoa, Indonesia • Mount St. Helens, Washington, USA • Mount Tambora, Indonesia • Mauna Loa, Hawaii • Eyjafjallajökull, Iceland • Mount Pelée, Martinique, Caribbean
Eruptions	Volcanic eruptions can send ash high into the air, over 30km (17 miles) above the Earth's surface
Seismic waves	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.

Key vocabulary/Tier 3	
Volcano	A rupture in the Earth's crust where molten lava, hot ash, and gases from below the Earth's crust escape into the air
Magma	Hot fluid or semi-fluid material below or within the earth's crust from which lava and other igneous rock is formed on cooling
Lava	Hot molten or semi-fluid rock erupted from a volcano or fissure, or solid rock resulting from cooling of this.
Crater	a large bowl-shaped cavity in the ground, typically caused by an explosion or the impact of a meteorite.
Earth's crust	The Earth's hard, outer later, making less than 1% of the Earth's volume. It is made of different types of rocks: igneous, metamorphic and sedimentary.
Eruption	A volcano to become active and eject lava, ash and gases.
Earthquake	A sudden violent shaking of the ground, typically causing great destruction, as a result of movements within the earth's crust or volcanic action.
Tectonic plates	A massive, irregularly shaped slab of solid rock, generally composed of both continental and oceanic lithosphere.
Epicentre	The point on the earth's surface vertically above the focus of an earthquake.
Lithosphere	The rigid outer part of the earth, consisting of the crust and upper mantle.
Vibration	Move continuously and rapidly.
Seismic waves	An elastic wave in the earth produced by an earthquake or other means.