



## Lowerhouse Junior School Geography Overview Sheet



### Year 4 – How are mountains formed and what causes an earthquake, tsunami or volcano?



**Rationale:** Mountains arise from tectonic plates colliding, pushing earth upwards. Earthquakes occur when these plates shift suddenly, releasing energy. Tsunamis, massive waves triggered by underwater earthquakes, can devastate coastlines. Volcanoes form when molten rock escapes from beneath the earth's surface, leading to eruptions. Each phenomenon reveals nature's power and beauty.

#### **Substantive Knowledge:**

##### Locational Knowledge

Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America.

##### Human and physical geography

Describe and understand key aspects of physical geography, including: rivers, mountains, volcanoes and earthquakes.

#### **Overview:**

Lesson 1 – Locate the world's countries using maps. Describe key aspects of physical geography (introduction to mountains, earthquakes and volcanoes).  
Lesson 2 – Earthquakes study – causes and effects.  
Lesson 3 – Volcanoes Study – Types and Eruptions.  
Lesson 4 – Mountains Study – Formation and Features.  
Lesson 5 – Map Skills – Coordinates and Data Collection (use 4-fig grid refs to locate volcanoes, mountains, epicentres of earthquakes; collect data on earthquake occurrences or volcanic eruptions).  
Lesson 6 – (assessment lesson - use presentation/multimedia software to record and explain geographical features and processes).

#### **Key Vocabulary**

**Volcano** - A mountain or hill with a crater or vent which lava, rock fragments, hot vapour and gas are or have been erupted from the earth's crust  
**Earthquake** - A sudden, violent shaking of the ground, typically causing great destruction, as a result of movements within the earth's crust  
**Active** - Recent history of eruptions, likely to erupt again  
**Dormant** - Have not erupted for a very long time but could erupt again in the future  
**Extinct** - Are not expected to erupt again in the future  
**Thematic map** - A map showing a theme (heat)  
**Natural disaster** - A natural event such as flood, earthquake, hurricane that causes great damage or loss of life  
**Tidal wave** - An exceptionally large ocean wave caused by a volcanic eruption or earthquake  
**Tsunami** - A long high sea wave caused by an earthquake

#### **Impact/Assessment**

**Most Children will know:** • Volcanoes are mainly found around the Pacific 'ring of fire' • Names of volcanoes: Mount Vesuvius, Mount Etna, Krakatoa, Mount Saint Helens, Mauna Loa, Mount Fuji • Earthquakes can happen all around the world but they mainly happen around the Pacific 'ring of fire' • The most powerful earthquake was measured as 9.1 on the Richter Scale and was named Tohoku Earthquake • What are the different types of volcano? • There are 3 types of volcano: active, dormant, extinct • Volcanoes form at the earth's surface whereas earthquakes originate from deep within the earth's crust.