




















## What causes earthquakes and volcanic eruptions and how do they effect people?

★ Children's prior learning in this area	★ Cultural Capital Opportunities	★ Key vocabulary and glossary
<p><b><u>Year 3</u></b></p> <ul style="list-style-type: none"><li>• Where mountains are located and why.</li><li>• Weather of mountains and mountain ranges.</li></ul>	<p><b><u>Pompeii's Mount Vesuvius</u></b></p>  <p>Children to look at Mount Vesuvius eruption in 79CE. Explore how the volcanic eruption covered the town in ash and preserved the remains.</p>  <p>Children to observe recent news for any volcanic activity. Recent volcanic eruptions – Iceland Fagradalsfjall (2021 eruption) <a href="#">Iceland volcano: Where is it and when will it erupt? - BBC Newsround</a></p>	<p>Eruption</p> <p>Earthquake</p> <p>Tectonic plates</p> <p>Richtar scale</p> <p>Friction</p> <p>Magma</p> <p>Lava</p> <p>Types of volcanoes: Active, Dormant, Extinct</p>

<p><b>Enquiry Question: What is a volcano?</b></p>	<p><b>Enquiry Question: What causes earthquakes?</b></p>	<p><b>Enquiry Question: Where are volcanoes found? Why?</b></p>
<p><b>Concept: Human &amp; Physical</b></p> 	<p><b>Concept: Location &amp; Place</b></p>  <p><b>Thread: Cause and consequence</b></p> 	<p><b>Concept: Mapping</b></p> 
<p><b>Recall and retrieve (Year 3 Knowledge):</b>   Children to recall a definition of a mountain and use a world map to identify where mountains are found.</p> <p>Children will know that a volcano is formed from a hole in the Earth's plates that opens to a pool of molten lava. They will know that pressure from underneath the surface of the earth builds and escapes by shooting up through the volcano causing an eruption. They will know that the different types of volcanoes are: active, dormant, extinct.</p> <p><b>Task</b></p> <p><b>Practice:</b> Children to write a definition of a volcano. Children to label the key parts of a volcano using key vocabulary (plates, molten lava, pressure, eruption, escape).</p> <p><b>Apply:</b> Children to match definitions of the different types of volcano to their name (active, dormant, extinct).</p> <p><b>Deepen:</b> Can you locate volcanoes in the UK? Allow children to explore this question, debate and discuss their opinions using evidence without providing the answer.</p>	<p><b>Recall and retrieve (Year 3 Knowledge):</b>   Children will know that a tectonic plate is where the Earth's land and water sit on top of. They will know that these plates are moving and this friction causes earthquakes. Children will know the connection between the tectonic plates and earthquake locations by using a world map.</p> <p><b>Task:</b></p> <p><b>Practice:</b> Children to use pieces of paper/card to act as 'plates' and explore the different directions they can move. (towards each other, away from each other, opposite directions)</p> <div data-bbox="817 853 1444 1053" data-label="Diagram"> </div> <p><b>Apply:</b> Using knowledge learnt in 'Practice' part of the lesson, use DigiMaps (tectonic plates overlay only) to discuss and suggest where earthquakes are likely to be. Understand the <b>cause</b> of earthquakes and <b>consequence</b> of living near a tectonic boundary.</p> <p><b>Deepen:</b> Why aren't there earthquakes in the UK?</p>	<p><b>Recall and retrieve (Year 3 Knowledge):</b>   Children will know that the 'Ring of Fire' is found on the coast of the Pacific Ocean, which is home to 90% of the earth's earthquakes and 75% of earth's volcanoes. They will know this is because it is a boundary where tectonic plates move.</p> <p><b>Task:</b></p> <p><b>Practice:</b> Look at a world map using DigiMaps (mountains/volcanoes/tectonic plates/tectonic plates boundary overlay) and identify where mountains and volcanoes are found and why.</p> <p><b>Apply:</b> Compare and contrast the volcanos in the UK compared to 'The Ring of Fire'. Children to explain why there are more volcanos and earthquakes located there.</p> <p><b>Deepen:</b> Reflect on previous lessons, using a map to explore the link between earthquakes and volcanoes. Children will know that they are both formed due to movement of the tectonic plates and that they are both formed due to heat and energy being released from the Earth's core.</p>

<p><b>Enquiry Question:</b> Do people visit volcanoes?</p>	<p><b>Enquiry Question:</b> What is the impact of earthquakes?</p>	<p><b>Enquiry Question:</b> How do earthquakes affect us?</p>
<p><b>Concept: Settlement</b> </p> <p><b>Thread: Interpreting evidence</b> </p>	<p><b>Concept: Human and Physical</b></p> 	<p><b>Concept: Environment &amp; Sustainability,</b> </p> <p><b>Fieldwork</b> </p>
<p> Children will know that some volcanoes have recently become tourist attractions whilst other volcanoes remain highly dangerous and heavily avoided. Children will research the pros and cons of visiting/ living near volcanoes.</p> <p><b>Pros:</b> Soil is highly fertile and good for growing, secluded areas so range of different animals and plants, tourism opportunities</p> <p><b>Cons:</b> unpredictable nature means volcanos can be highly dangerous</p> <p><b>Task</b></p> <p><b>Practice:</b> Children to read statements and discuss/sort into groups as to whether they think this is a pro or con of living near a volcano.</p> <p><b>Apply:</b> Children to create a fact file/information booklet detailing the pros and cons of living near a volcano.</p> <p><b>Deepen:</b> Form their own opinion, interpret evidence and have a whole class debate as to whether they would/wouldn't settle near a volcano.</p>	<p><b>Recall and retrieve:</b> Units of measure (maths) – e.g. litres, metres, centimetres. Do they know what unit of measure is used to measure earthquakes. Introduce them to the Richter scale, explaining why other units of measure wouldn't be effective.</p> <p> Children will know that earthquakes are measured on a richter scale and triangulated. They will know that the earthquakes that cause damage are more than 4 on the Richter scale. They will know that a major earthquake is the one which registers more than 7 on the Richter scale.</p> <p><b>Task:</b></p> <p><b>Practice:</b> Children to be given different Richter scale readings for various volcanic eruptions and work out which eruption was the strongest/weakest. Match the numbers 1-7 (1 being the weakest, 7 being the strongest) with definitions of different earthquakes.</p> <p><b>Apply:</b> Children to apply their definitions to pictures of the damage caused. Sort the pictures with the numbers and definitions above.</p> <p><b>Deepen:</b> Justify their choices</p>	<p> Children will know that earthquakes impact humans in the following ways:</p> <ul style="list-style-type: none"> <li>• Loss of life</li> <li>• Social impact (loss of buildings e.g. shops, work, homes, schools, roads)</li> <li>• Injuries</li> <li>• Economic (cost of rebuilding any lost buildings)</li> <li>• Environmental (landslides, dust clouds)</li> <li>• Tourism (visiting extinct volcanoes)</li> </ul> <p><b>Task:</b></p> <p><b>Apply:</b> Children to present findings in a short written report exploring the human impact of volcanoes and earthquakes.</p> <p><b>Deepen:</b> How do earthquakes affect others? – relate impact to various animal species and climate.</p>

