

Year Group	4
Term	SPRING 2
Subject	GEOGRAPHY

Topic	Volcanoes, Mountains and Earthquakes
Curriculum Intent	Describe and understand key aspects of: physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle

Key Vocabulary	<ul style="list-style-type: none"> • physical features • mountain range • valley • peak • relief map • earthquake • plate boundary • seismic wave • fault line • tectonic plates • tsunami • magnitude • Richter Scale • seismologist • region • volcano • magma • lava • Earth's crust • erupt • volcanologist • eruptions • impact • volcanic soil • hot springs • earthquake • plate boundary • mountain range • volcano • tectonic plates
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Geographic Skills	<ul style="list-style-type: none"> • To use maps, atlases and globes to locate and describe volcanoes • To use maps, atlases and globes to locate and describe the Earth's plates • To use digital/computer mapping to describe volcanoes around the world • To recognise and use a range of geographical terms when describing physical features
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Geographic Knowledge	To describe and label features of Earth's structure • To know that the Earth's crust is made of plates which meet at plate boundaries • To know that earthquakes and volcanoes occur at plate boundaries • To know the physical features of volcanoes • To learn about advantages and disadvantages of settlements near volcanoes and in earthquake zones
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Week	Learning Objective	Activities	Outcome
1	What are mountains?	Use a range of resources to show the children that mountains are physical geographical features. Children will identify some of the world's key mountain ranges, such as the Alps in Europe, the Rockies in North America, the Andes in South America and the Himalayas in Asia. Use resources to explore and help the children to understand the features of a mountain, such as valleys, river formations, steep sides and peaks. The children will recap their learning from Year 3 on reading relief maps.	<ul style="list-style-type: none"> • Name and locate some key mountain ranges on a world map • Explain some features of a mountain • Identify some mountainous features on a relief map

		<p>Task: Ask the children to draw a diagram of a mountain range and label the key features. This could include the base, valleys, peaks and treelines.</p> <p>Challenge Task: Once the children have completed the Mission Assignment, ask them to apply this knowledge and discuss these features on a relief map. Are they able to point out the valleys, the peaks and the low-lying areas on the</p>	
2	What are earthquakes?	<p>Recap children's learning about mountain ranges.</p> <p>Introduce the children to the tectonic plate theory (this should be kept simple as it will be expanded on in KS3). The children will learn about the plate boundaries, where they are located and the role of fault lines (long cracks in the surface of the Earth) in causing earthquakes. The presentation will show the children where earthquakes have happened around the world and explain the impact that has on the Earth's surface and how to stay safe.</p> <p>Task: Ask the children to create a poster that explains how to stay safe during an earthquake.</p> <p>Challenge Task: Ask the children to write a paragraph to explain what an earthquake is and its effects, such as surface damage or tsunamis.</p>	<ul style="list-style-type: none"> • Locate areas where earthquakes have occurred • Explain how to stay safe during an earthquake • Describe how earthquakes occur
3	Do earthquakes still happen?	<p>Recap on the children's understanding of earthquakes and their impacts on the Earth's surface.</p> <p>Children will learn about some recent earthquakes that have occurred, for instance, in Turkey/Syria in 2023 that reached 7.8 magnitude and in Taiwan in 2024 that reached 7.4 magnitude. The children will learn that although the magnitude was of a similar size, the impact of the Taiwan earthquake was far less due to quake preparation and building regulations (wealthier countries can prepare more effectively). The children will be introduced to seismologists who study earthquakes and how seismic waves travel through the earth to better understand earthquakes and their impact.</p> <p>Task: Ask the children to create a news report on a recent earthquake in written or oral form,</p> <p>Challenge task: To write report from different perspectives, rescue team, victim, eyewitness.</p>	<ul style="list-style-type: none"> • Name and locate some areas where recent earthquakes have occurred • Understand that earthquakes can cause significant damage on the Earth's surface • Describe the impact of earthquakes on those living in affected regions
4	What are volcanoes?	<p>Ask the children to look at a map that shows the plate boundaries and then show the location of earthquakes that have been recorded - reinforce their knowledge that most earthquakes take place along the boundary lines. Then, ask the children to look at a map that shows where volcanoes are located. What do they notice? They should see that most volcanoes are also located along the plate boundaries.</p>	<ul style="list-style-type: none"> • Understand what happens during a volcanic eruption • Explain what a volcano is and what happens during an eruption

		<p>Introduce the children to how volcanoes are formed and how they erupt. The children will learn that a volcano is an opening in the Earth's surface. They will be introduced to the layers of the Earth: the crust, mantle, outer core and inner core, and that it is molten rock from the Earth's mantle that can be seen in a volcanic eruption.</p> <p>Task: the children to draw a diagram of a volcano, labelling the magma chamber, crater, lava, gas and ash. The children should further demonstrate their understanding by writing an explanation of what a volcano is.</p> <p>Challenge Task: Ask the children to further explain how a volcanic eruption happens. Can they begin to understand how this might affect people's lives?</p>	<ul style="list-style-type: none"> • Describe how a volcanic eruption happens and the effect this might have on people's lives
5	Do volcanoes still erupt?	<p>Recap on the children's knowledge of volcanoes.</p> <p>Introduce the children to the work of volcanologists who study volcanic activity to understand and predict future eruptions. The children will learn about a recent volcanic eruption in Iceland in 2024. They will also learn about Hunga-Tonga-Hunga-Ha'apai, which is an example of an underwater volcano in the South Pacific that erupted in 2022.</p> <p>Task: children to write a fact file about a recent volcanic eruption. Ask the children to include the location of the volcano, when the eruption took place and what the impact was on the people living in the region.</p> <p>Challenge Task: Encourage the children to write a balanced fact file that includes the pros and cons of living in a volcanic region.</p>	<ul style="list-style-type: none"> • Name and locate some areas where recent volcanic eruptions have occurred • Describe the events that took place during a recent volcanic eruption • Explain the events that took place during a volcanic eruption and how this impacted people's lives
6	Assessment: Why do we have volcanoes, mountains and earthquakes?	<p>Recap some famous volcanoes and what happened when they erupted?</p> <p>Recap how mountain ranges are formed and their key features. It will then recap the cause and impact of earthquakes and volcanic eruptions.</p> <p>Assessment: Using the handout, ask the children to describe three areas or events: a mountain range, a location of a recent earthquake and a location of a recent volcanic eruption. In the spaces provided, the children can write about each feature or event. Ask them to explain how it was formed and what events occurred. There is space for the children to draw and label a diagram for each feature or event.</p> <p>Challenge Task: Encourage the children to use scientific explanations to describe the mountain range, earthquake and volcanic eruption.</p>	<ul style="list-style-type: none"> • Understand why we have volcanoes, mountains and earthquakes • Explain why we have volcanoes, mountains and earthquakes • Describe some features of mountains and some events that take place during earthquakes and volcanic eruptions