



How are people and places affected by earthquakes and volcanoes?

<p>Lesson Overview:</p> <ol style="list-style-type: none"> 1. What is the structure inside of the Earth? 2. How are earthquakes and volcanoes distributed? 3. What happens when tectonic plates meet? 4. What are the different types of volcanoes and their hazards? 5. How can a volcanic eruption be managed? Montserrat Decision-Making Exercise 6. What causes earthquakes? 7. What were the impacts and responses of the Nepal 2015 earthquake? 8. What were the impacts and responses of the Chile 2010 earthquake? 9. How can the risks from tectonic hazards be reduced? 10. Revision/ consolidation 	<p>Key Words:</p> <ul style="list-style-type: none"> • Collision plate boundary- where two plates are moving towards each other, creating fold mountains. • Convection currents- circular movement of magma in the earth’s mantle which drives tectonic plate movement. • Conservative plate boundary – where two plates are sliding alongside each other • Constructive plate boundary – where two plates are moving apart • Continental crust- thicker, less dense crust under the land. • Destructive plate boundary – where two plates are moving towards one another and the oceanic plate subducts. • Distribution – the pattern of a geographical feature • Epicentre- the point on the surface above the focus of the earthquake, where the magnitude is strongest. • Focus- The place in the earth where the plates are moving. • Hot spots- where the crust is thin and magma is able to break through to the surface. • Immediate responses – search and rescue and keeping survivors alive by providing medical care, food, water and shelter • Lahar- volcanic mudflow, formed by water mixed with ash. • Lava- molten rock above the earth’s surface (erupted). • Long-term responses – re-building and reconstruction, with the aim of returning people’s lives back to normal and reducing future risk • Magma- molten rock beneath the earth’s surface. • Magnitude- measurement of how much energy is released during an earthquake. • Natural Hazard – an extreme natural event that can cause loss of life, extreme damage to property and disrupt human activities • Oceanic Crust- thinner, denser crust under the oceans. • Primary effects – happen immediately and are caused by the ground shaking e.g. deaths, injuries and damage to roads and buildings • Pyroclastic flow- a super-heated mass of gas, ash and volcanic material violently erupted at rapid speed. • Secondary effects – are a result of the primary effects (ground shaking) and includes tsunami, fires and landslides. • Seismometer- instrument to measure earthquake strength. • Subduction- when the denser, oceanic crust is forced under the less dense continental crust at a destructive boundary. • Tectonic hazard – hazards associated with the movement of tectonic plates e.g. earthquakes, volcanoes and tsunamis • Tsunami- fast moving wave caused by an earthquake under the sea. • Volcano- a cone- shaped mountain made from erupted lava and ash.
<p>Suggested reading</p> <p>Fiction books:</p> <ul style="list-style-type: none"> • Pompeii by Robert Harris • Shook: An Earthquake, A Legendary Mountain Guide and Everest’s Deadliest Day by Jennifer Hull <p>Non-fiction book:</p> <ul style="list-style-type: none"> • Everything Volcanoes and Earthquakes by National Geographic 	<p>Skills</p> <ul style="list-style-type: none"> • Describing distributions using geographic vocabulary. • Explaining physical processes using geographic vocabulary. • Comparing volcanoes • Comparing earthquake effects using data for Chile and Nepal. • Hazard management decision making. • Creativity- designing an earthquake proof structure.