

# Year 12 Geography | Term 3

## How does the atmosphere and the lithosphere present hazards to human populations?

**Topic Overview:** This term, students will focus on the atmosphere and the lithosphere which intermittently but regularly presents hazards to human populations, often in a dramatic and sometimes catastrophic fashion. By exploring the origin and nature of volcanic hazards, seismic hazards, storm hazards and wildfires and the various ways in which people respond to them, students will be able to engage with many dimensions of the relationships between people and the environment in which they live.

	Lesson Exploration	Knowledge & Skills Exploration	Specification Link	Key Words
Week 1: Lesson 1	What is the concept of a natural hazard and what are the potential impacts?	Students will experience exploring the definition of a natural hazard through use of imagery.	<a href="#">Specification Link</a>	Natural hazard Perception Risk
Week 1: Lesson 2	Why do people's perceptions of natural hazards differ?	Students will experience investigating a range of factors that may influence people's perception of a natural hazard and ranking them in order of importance.		Vulnerability Adaptation Mitigation Fatalism
Week 1: Lesson 3	How can we manage natural hazards?	Students will experience analysing a range of models such as the disaster/ risk management cycle and the Park impact/ response model.		Community preparedness/ risk sharing
Week 1: Lesson 4	How has the theory of plate tectonics developed over time?	Students will experience assimilating a range of information to draw conclusions on the most likely way that plates have shifted over time.		Frequency Integrated risk management Magnitude
Week 2: Lesson 1	How do plates interact at their margins?	Students will experience constructing a series of annotated diagrams to explain the different interactions at plate margins.		Prediction Primary/ secondary effects Resilience Distribution Plate tectonics Sea-floor spreading

Week 2: Lesson 2	Why do volcanoes occur?	Students will experience compiling a storyboard to demonstrate the process of a volcanic eruption.		Subduction Ocean ridges Rift valleys Horst Deep sea trenches Island arcs Fold mountains Slab pull/ ridge push Gravitational sliding Lithosphere Pyroclastic flow Tephra Hot spots Volcanic bombs Lahars Volcanic explosivity index (VEI) Earthquake Tsunami Retrofitting Focus Epicentre Moment magnitude scale (MMS) Mercalli Scale Richter Scale Tropical cyclone Hurricane/ typhoon Saffir-Simpson scale Storm surge Wildfire Ignition source Pyrophytic Retardants
Week 2: Lesson 3	What are the impacts of volcanic eruptions and how are they managed?	Students will experience categorising short and long-term effects of volcanic eruptions.		
Week 2: Lesson 4	How does risk and vulnerability from volcanic eruptions differ in LICs?	Students will experience researching the eruption of Mt Nyiragongo, 2002 to create a case study profile		
Week 3: Lesson 1	How does risk and vulnerability from volcanic eruptions differ in a HIC?	Students will experience comparing the Nyiragongo eruption to a HIC case study of Eyjafjallajokull .		
Week 3: Lesson 2	Why do earthquakes occur?	Students will experience analysing maps to show the global distribution of earthquakes.		
Week 3: Lesson 3	What are the impacts of earthquakes and how are they managed?	Students will experience evaluating the usefulness of the different ways in measuring earthquakes.		
Week 3: Lesson 4	How does risk and vulnerability from earthquakes differ in LICs?	Students will experience researching and presenting HIC and LIC case studies in pairs which will then be applied to the model of vulnerability.		
Week 4: Lesson 1	How does risk and vulnerability from earthquakes differ in a HIC?			
Week 4: Lesson 2	Why do tropical storms occur?	Students will experience constructing and annotating a diagram to explain the process of tropical storm formation.		

Week 4: Lesson 3	What are the impacts of tropical storms and how are they managed?	Students will experience exploring the different prevention, protection and preparedness strategies for tropical storms.		Multi-hazard environment
Week 4: Lesson 4	How does risk and vulnerability from tropical storms differ in a HIC?	Students will experience creating a case study profile for Hurricane Katrina, detailing 5Ws + H		
Week 5: Lesson 1	Assessment			
Week 5: Lesson 2	How does risk and vulnerability from earthquakes differ in LICs?	Students will experience comparing the damage from Hurricane Katrina to Typhoon Haiyan and explaining why.		
Week 5: Lesson 3	Why do wildfires occur?	Students will experience constructing and analysing a choropleth map to show wildfires across the USA.		
Week 5: Lesson 4	What are the impacts of wildfires and how are they managed?	Students will experience a decision making exercise for the way in which wildfires should be managed in Australia.		
Week 6: Lesson 1	Try Now	Students will experience try now activities to help close gaps in knowledge and skills identified in WK5 assessment.		
Week 6: Lesson 2	What were the impacts and responses to the 2009 bushfire in Victoria?	Students will experience pair work where they will assess the risk and vulnerability in Victoria using evidence and data.		
Week 6: Lesson 3	How are impacts managed in a multiple hazard environment?	Students will experience the use of GIS in mapping natural hazards across the Philippines.		

Week 6: Lesson 4	How are impacts managed in a local scale place in a hazard setting?	Students will experience constructing a compound bar graph to show building damage in Kobe based on previous earthquakes.		
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