

The Challenge of Natural Hazards Revision Checklist

	Know well	Know little	No idea
The concept of hazard in a geographical context			
The concept of the terms ' hazard ', ' natural hazard ' and ' disaster ' as used by geographers.			
Types of natural hazards and their common characteristics - geophysical, atmospheric hydrological.			
' risk ' and ' vulnerability '			
Factors influencing the perception of natural hazards - socio-economic status, level of education, employment status, religion, cultural background family situation, past experience, personal values and personality.			
Three key responses to hazards -fatalism, adaptation and fear.			
The difference between primary and secondary (short term and long term) impacts of natural hazards.			
Key ideas relating to the management of natural hazards - community preparedness/risk sharing, integrated risk management, mitigation, monitoring, prediction, prevention, protection, reconstruction, rehabilitation, relief, resilience. Park Response Model and the Hazard Management Cycle .			
' distribution ', ' frequency ' and ' magnitude '			
PLATE TECTONICS			
Earth structure and internal energy sources.(crust, lithosphere, asthenosphere, mantle, outer core, inner core)			
The distribution of the major tectonic plates and plate boundaries.			
Internal sources of heat , including: residual heat from Earth's formation/ radioactive decay of elements in the core.			
Characteristics and origin of continental and oceanic crust .			
Nature of plate movement - Speed and direction of movement of the major plates. The evolution of various theories to explain plate movement (gravitational sliding, ridge push, slab pull, convection currents, sea floor spreading (possibly paleomagnetism).			
Destructive, constructive and conservative plate margins . Characteristic processes : seismicity and vulcanicity. Associated landforms : young fold mountains, rift valleys, ocean ridges, deep sea trenches and island arcs, volcanoes.			
Magma plumes and their relationship to plate movement.			
VOLCANIC HAZARDS			
The distribution of volcanic activity as being mainly associated with: ocean ridges and sea floor spreading, destructive plate boundaries and subduction zones, rift valleys, intraplate vulcanicity - hot spots.			
The Nature of volcanic events and volcanic features are the result of a combination of factors - type of plate boundary (constructive, destructive or intraplate) - nature of magma, ie viscosity (silica, gas and water content), explosivity (Volcanic Explosivity Index) . acidic → basic, rhyolitic → andesitic → basic.			

<p>Primary hazards (impacts) - ash, lava flows, nuées ardentes, pyroclastic events, tephra, volcanic gases</p> <p>Secondary hazards (impacts) - acid rain, climate change, flooding, tsunamis. (Environmental, social, economic, political.)</p>			
<p>Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation.</p>			
<p>Recent Volcanic Event (Etna, Monserrat, Eyjafjallajökull) - date, location, plate boundary, factors affecting those perceptions at a range of scales (eg, magnitude, frequency, population characteristics etc.) causes, impact, response</p>			
Seismic hazards			
<p>The nature of seismicity and its relation to plate tectonics: destructive plate boundaries - and subduction zones, conservative plate margins/transform faults.</p>			
<p>Factors influencing nature of seismic events and resulting hazard - type of plate boundary, nature and rate of movement, depth of focus.</p>			
<p>'spatial distribution', 'magnitude and frequency' in relation to seismic events. (Richter Scale, Mercalli Scale, Moment Magnitude Scale.)</p>			
<p>Primary hazards (impacts) - Earthquakes, Shockwaves, Ground shaking, Ground rupture</p> <p>Secondary hazards (impacts) - Soil liquefaction, Landslides/avalanches, Tsunamis, Fires, Effects on people and the built environment. (Environmental, social, economic, political.)</p>			
<p>'Short and long-term' responses</p>			
<p>Risk management is designed to reduce the impacts of seismic hazards via: preparation, mitigation, prevention, adaptation.</p>			
<p>Recent Seismic Event (Japan, Haiti)- date, location, plate boundary, factors affecting those perceptions at a range of scales (eg, magnitude, frequency, population characteristics etc.) causes, impact, response</p>			
STORM HAZARDS			
<p>The nature of tropical storms and their underlying causes (ocean location where sea temperatures are above 27°C/ ocean depth of at least 70m to provide moisture and latent heat/ a location beyond 5° north and south of the equator where the effect of the Coriolis force is greatest/low level convergence of air/rapid outflow of air in the upper atmosphere.)</p>			
<p>Spatial distribution' (different names different oceans) 'magnitude and frequency' (Saffir-Simpson Scale.)</p>			
<p>Impacts: primary/secondary, environmental, social, economic, political -(high winds storms surges, coastal flooding, river flooding, landslides.)</p>			
<p>'Short and long-term' responses</p>			
<p>Risk management is designed to reduce the impacts of storm hazards via: preparation, mitigation, prevention, adaptation.</p>			
<p>TWO recent tropical storms from contrasting areas of the world (Katrina, Haiyan) date, location, plate boundary, factors affecting those perceptions at a range of scales (eg, magnitude, frequency, population characteristics etc.) causes, impact, response</p>			

FIRES IN NATURE			
Nature of wildfires. Conditions favouring intense wild fires: vegetation type, fuel characteristics, climate and recent weather and fire behaviour			
distribution of wildfires.			
Causes of fires: natural and human agency.			
Impacts: primary/secondary, environmental, social, economic, political			
'Short and long-term' Responses			
Risk management is designed to reduce the impacts of wildfires via: preparation, mitigation, prevention, adaptation.			
Recent Wildfire event Event (Alberta, Australia)- date, location, plate boundary, factors affecting those perceptions at a range of scales (eg, magnitude, frequency, population characteristics etc.) causes, impact, response			
CASE STUDY OF A MULTI HAZARDOUS ENVIRONMENT			
PHILLIPPINES - Case study of a multi-hazardous environment beyond the UK to illustrate and analyse the nature of the hazards and the social, economic and environmental risks presented, and how human qualities and responses such as resilience, adaptation, mitigation and management contribute to its continuing human occupation.			
SOMERSET FLOODS - Case study at a local scale of a specified place in a hazardous setting to illustrate the physical nature of the hazard and analyse how the economic, social and political character of its community reflects the presence and impacts of the hazard and the community's response to the risk.			