

Detailed unit content

Section A Introduction to the Dynamic Planet (compulsory topics 1, 2, 3 and 4)

Topic 1	Restless Earth	
	Key ideas	Detailed content
1.1 How and why do the Earth's tectonic plates move?	<ul style="list-style-type: none">a The Earth's interior has a layered structure, with different composition and physical properties; the Earth's core generates heat and convection currents drive plate motion.b There are conservative, constructive and destructive plate boundaries, each with characteristic volcanic and earthquake hazards.	<p>Interpret a cross-section of the Earth, with details (temperature, density, composition, physical state) of layered structure (including the asthenosphere); using rock samples to contrast continental and oceanic crust.</p> <p>Examine the core's internal heat source (through radioactive decay) and how this generates convection, which drives plate motion and generates the Earth's magnetic field.</p> <p>Explain the distribution of the three plate boundary types and identify major plates.</p> <p>Examine the causes of contrasting volcanic (volcano type, magma type and explosivity) and earthquake hazards, including tsunami (shallow versus deep, magnitude) at contrasting example locations, e.g. Iceland and Indonesia.</p>

Key ideas	Detailed content
1.2 What are the effects and management issues resulting from tectonic hazards?	
a Volcanic and earthquake hazards affect people in different ways and at contrasting locations.	Investigate the primary and secondary impacts of earthquakes in two named locations, e.g. the 2005 Kashmir versus 1989 Loma Prieta earthquakes. To include reasons for contrasting impacts on property and people.
b Management of volcanic and earthquake hazards, at contrasting locations, ranging from short-term relief to long-term planning, preparation and prediction.	<p>Examine the primary and secondary economic and social impacts of one volcanic event.</p> <p>Examine the role of prediction, warning and evacuation in relation to volcanic and earthquake hazards. Contrasting hazard-resistant design in the developed and developing world.</p> <p>Evaluate the role of immediate response and relief efforts linked to a named tectonic hazard event, for example the Izmit earthquake in 1999.</p>