

Statements you need to know for Restless Earth [RE]

Volcanoes and Earthquakes

Know that the Earth has a layered structure with a thin crust on a largely solid mantle and a core that has a liquid outer part and a solid inner part.

Know that the crust and the outer part of the mantle form the lithosphere, which is solid.

Know that the mantle below the lithosphere, whilst largely solid, can flow.

- Know that a seismograph is a record of earthquake waves.
- Understand the behaviour of the three types of earthquake wave; P, S, L.
- Know how travel times and paths of earthquake waves provide evidence for plate tectonics and for the layered structure of the Earth.

Stories in the rocks

Understand how the rock sequences, which form the lithosphere, were formed by the rock cycle processes acting on and beneath the surface.

Know the evidence contained in rocks for: the relative ages of rock sequences; the past climates in which sediments were deposited; the processes of rock formation.

Know how the relative ages of rock formations can be determined from sequencing principles and from the fossils they contain.

Plate Tectonics

Know that the lithosphere is broken into tectonic plates, which move slowly on the mantle.

Understand how the movement of tectonic plates causes earthquakes, volcanoes and the formation, deformation and recycling of rocks.

- Know that evidence for the plate tectonic theory comes from magnetic stripes, matching of continental margins, rock types and fossils, apparent movement of the magnetic poles.

Composition of the oceans

Understand how processes of erosion of rocks, formation of sedimentary rocks and out-gassing of the mantle have led to the present composition of the oceans.