Natural Disasters

Human and Physical Geography

Quick Facts

- The Earth is made up of several layers: the inner core, the outer core, the mantle and the crust.
- Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other
- The largest volcano in Europe is Mount Etna in Sicily (Italy). Yellowstone National Park is on top of a super volcano.

Vocabulary

Inner core	The solid innermost part of the Earth.
Outer core	The outer core lies above Earth's **solid inner core** and below its mantle.
Mantle	The layer of earth between the crust and core.
Crust	The outermost layer of Earth
Tectonic plates	Tectonic plates are pieces of land that connect together on the Earth's outer shell.
Epicentre	The point on the Earth's surface directly above the focus of an earthquake
Fault	A **fault** is the boundary between tectonic plates and is where earthquakes happen
Richter scale	A numerical scale for expressing the magnitude of an earthquake
Magnitude	The strength of an earthquake according to the Richter scale
Seismic wave	Seismic waves are waves of energy that travel through Earth's layers after an earthquake

Volcanoes

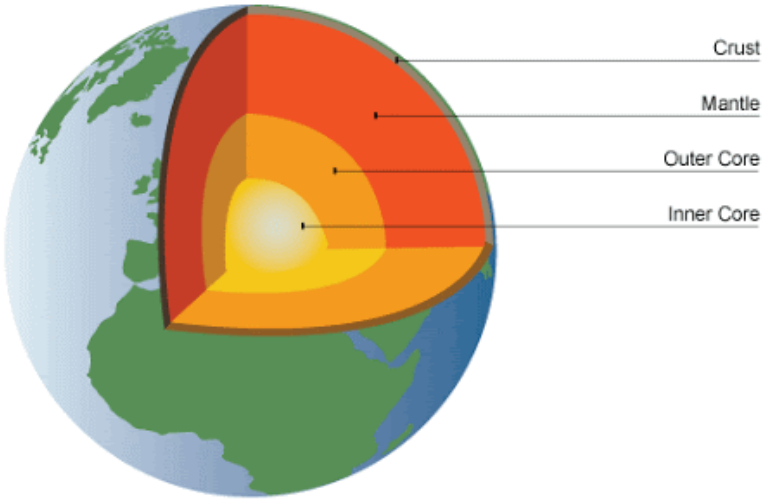
- A volcano an opening in the Earth's crust through which lava, ash, and gases erupt.
- Volcanoes have long vents that go all the way down through the Earth's first layer, the crust, to magma in between the crust and the mantle (the Earth's second layer). It is so hot there that rocks melt into liquid. This is called magma, which travels up through volcanoes and flows out as lava in an eruption.
- There are three ways to describe a volcano and explain what it's doing – active, erupting, and dormant
- Some volcanoes, called submarine volcanoes, are underwater e.g. Axial Seamount (west of Oregon USA).
- There are no active volcanoes in the UK but Arthur's Seat in Edinburgh is an extinct volcano. The largest volcano in Europe is Mount Etna in Sicily (Italy). Yellowstone National Park is on top of a super volcano.
- Many people depend on volcanoes for their everyday survival. The steam from volcanoes is used to produce energy in some power stations (in New Zealand and Iceland). They attract tourists and therefore jobs in hotels, restaurants and gift shops. Once cooled, lava can be mined and can contain precious metals e.g. gold, silver and diamonds. Volcanoes are mineral rich so the area around is very fertile land.

Earthquakes

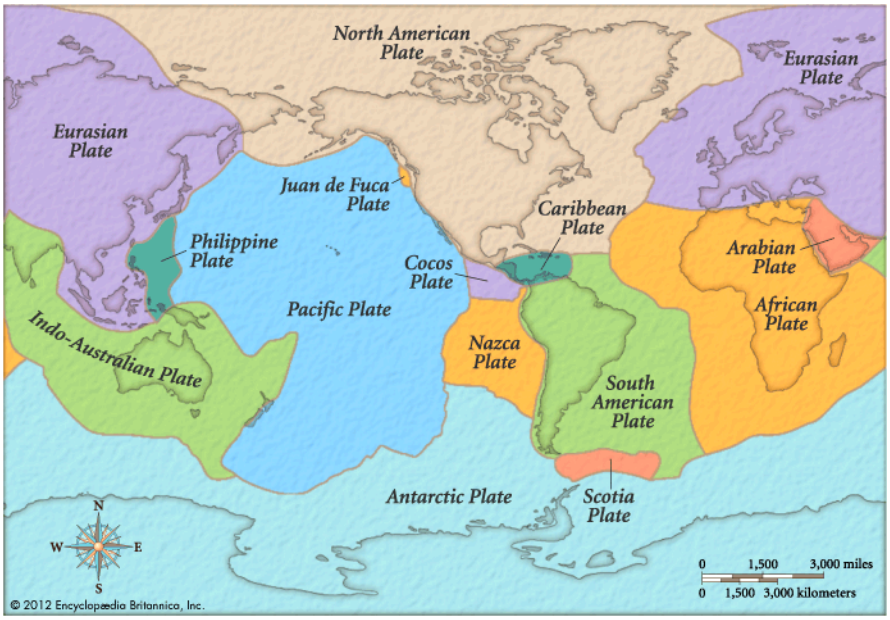
- An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates. Earthquakes can happen along any type of plate boundary.
- Earthquakes occur when tension is released from inside the crust. Plates do not always move smoothly alongside each other and sometimes get stuck. When this happens, pressure builds up. When this pressure is eventually released, an earthquake tends to occur.
- Earthquakes are most commonly experienced along the fault lines and plate edges in the Pacific Ring of Fire, the Alpide Belt, and the mid-Atlantic Ridge.
- California is the earthquake capital of the U.S.A. Serious quakes have occurred in recent memory in the state, including the 1989 Loma Prieta quake near San Francisco, which caused 63 deaths.
- Buildings in earthquake zones are designed and constructed to be earthquake resistant, for example concrete walls are reinforced with steel, foundations are made flexible and roofs are made as light as possible with heavy sections closer to the ground.

Diagrams

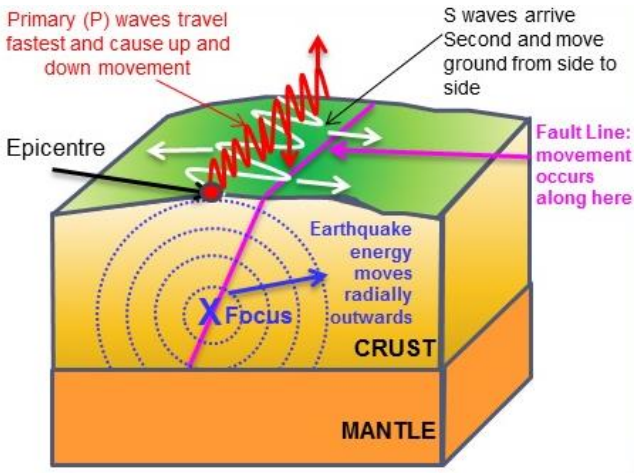
The Structure of the Earth



Location of Tectonic Plates



Anatomy of an Earthquake



Anatomy of a Volcano