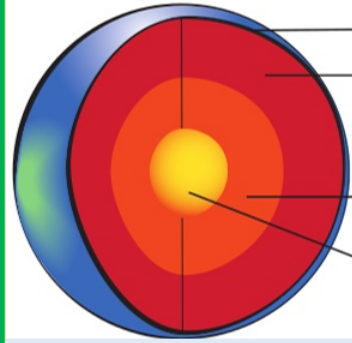


The Earth's Structure

The Layers of the Earth



Crust- The thinnest layer of the earth made of sand and rock that varies from 5-50km thick.

Mantle- A thick layer that reaches 2900km deep below the surface that reaches about half the distance to the centre of the earth. Temperatures are so hot here that parts of this layer liquify and flow like

Outer core- Made of molten iron this layer is liquid and reaches 5100km deep below the surface.

Inner Core- Made of iron this layer is 3870°C which should cause the rock to melt but the pressure is so high that it remains a solid. The centre of the earth is approx. 6400km below the surface.

Why do people live near volcanoes?

Fertile soil

Nice views

Precious resources

Tourism

Less floods

Geothermal energy

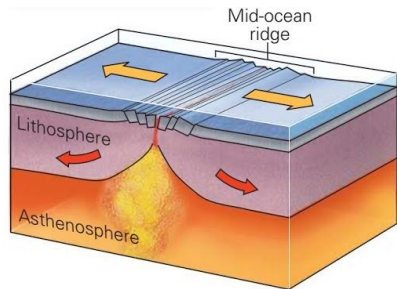
Tsunamis

Tsunami Case study: Boxing day Tsunami 2004

On December 26th, 2004, 8am, an earthquake measuring 9.1 on the Richter Scale happened under the Indian Ocean. This earthquake lifted a 750 mile stretch of seabed 40 metres high. This then formed a 1m tall wave at sea that was 100 miles long. This wave travelled at 500 mph until it hit shallower water and slowed down. As the wave slowed, it reached a height of 115 foot.

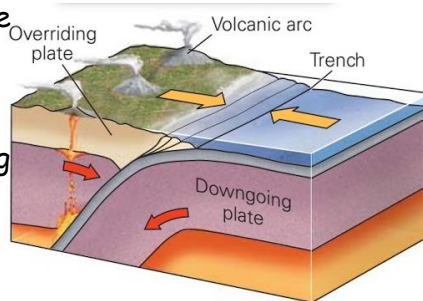
Eleven countries were hit by the tsunami waves, but the energy of the earthquake and tsunami was felt around the world.

Plate boundaries

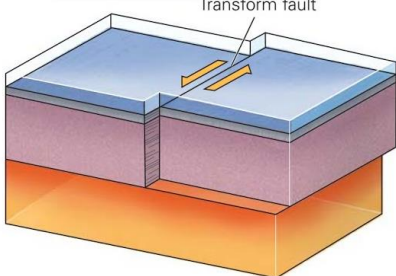


At a constructive plate boundary, two plates move away from each other creating a mid-ocean ridge, new crust is formed.

At a convergent plate boundary, two plates move toward each other, the down going plate sinks beneath the overriding plate (subduction).



Transform fault



At a conservative plate boundary, two plates slide past each other creating a fault at the surface.

Why is the planet so dangerous?

Earthquakes

Earthquake case study: Nepal, 2015

On Saturday 25th April 2015 an earthquake measuring 7.8 magnitude hit Kathmandu in Nepal. This was a devastating event that killed 9,000 people and injured 22,000 more.

Earthquake case study: Christchurch- New Zealand 2011.

The earthquake struck New Zealand's south island on 22nd February 2011 at 12:51pm. It was a magnitude 6.3 on the Richter scale. 181 people were killed in total and approximately 2000 were treated for minor injuries. Building damage was widespread as an earthquake in 2010 had weakened the buildings.

Volcanoes

Volcano case study: Iceland, 2010

Between March and June 2010, a series of volcanic events at Eyjafjallajökull in Iceland caused enormous disruption to air travel across Western Europe. The disruptions started over an initial period of six days in April 2010.

Volcano case study: Vesuvius, Pompeii 79AD

On August 24, 79AD Mount Vesuvius, in Italy, literally blew its top, erupting tons of ash, pumice and sulfuric gas miles into the atmosphere. Pyroclastic flows flowed over the city of Pompeii and surrounding areas.

