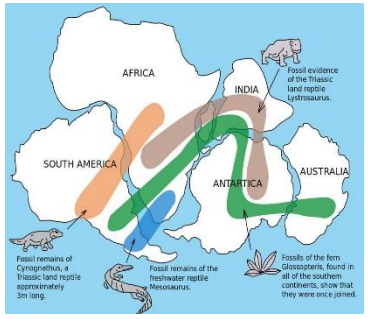
Geography: Year 7 - Tectonics

Key Vocabulary…

Natural hazard	Natural hazards are extreme natural events that can cause loss of life, extreme damage to property and disrupt human activities.
Earthquake	An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates
Volcano	A **volcano** is an opening in Earth's crust that allows molten rock from beneath the crust to reach the surface
Impacts	How the natural hazards effects people, the economy or the environment
Three Ps	Prediction, protection and preparation
Aid	Aid is assistance given from one country to another.

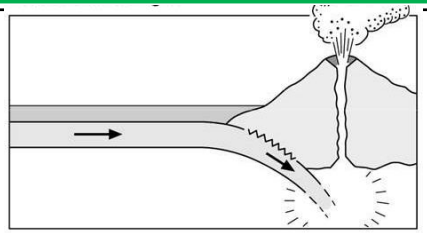
A long time ago…



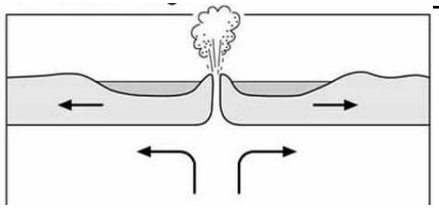
Continental drift describes one of the earliest ways geologists thought continents moved over time. This map displays an early "supercontinent," Pangea, which eventually moved to form the continents we know today.

Key plates…

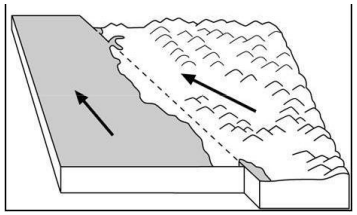
Destructive plate margin- two plates moving towards each other



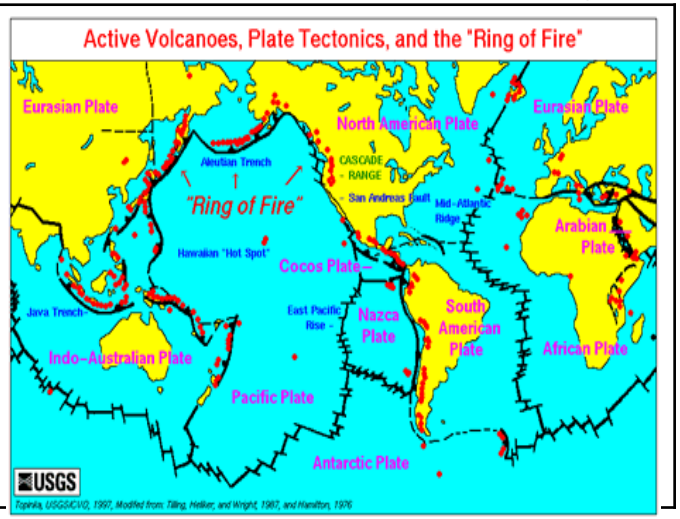
Constructive plate margin- two plates moving away from each other



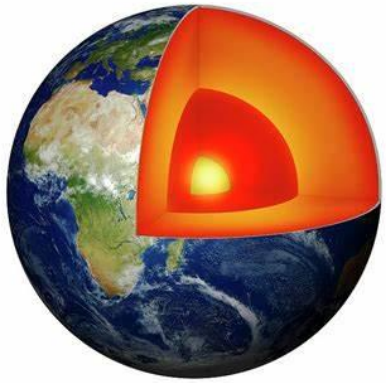
Conservative plate margin- two plates sliding past each other



Picture this…



Structure of the earth



Inner core
Outer core
Mantle
Crust

The tectonic plates are sections of the crust. They move due to convection currents in the mantle. Natural hazard occur along these plate margins.

The eruption of Mt St Helens May 18th 1980

Material from a massive landslide sped down the mountain, filling Spirit Lake and mixed with lake water, racing down rivers as a mudflow (or lahar).

Explosions of gas and steam flattened everything in its path

Snow melt mixed with ash and mud carried huge amounts of debris, trees, cars etc

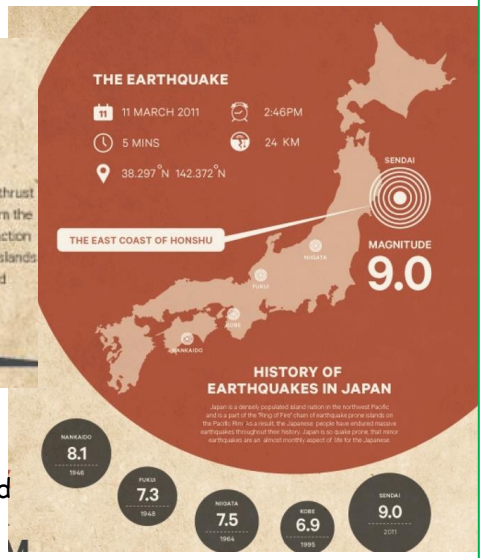
Ash clouds circulated the earth for 7 days.

The volcano was reduced in height by 400 meters.

57 DEAD.

Japan 2011 Earthquake

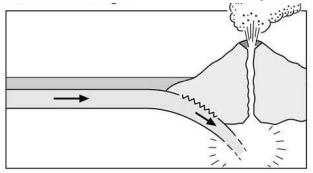
Began on 11 March 2011 at 2.46p.m. on the east coast of the largest island of Japan.
It measured 9.0 on the Richter Scale
It was the largest ever recorded in the country's history.

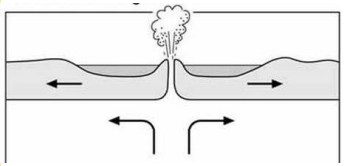


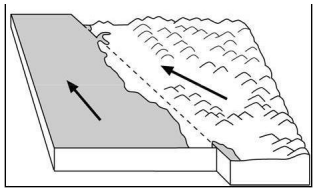
Impacts

- The Japanese government have reported that there were 15,883 deaths, 6,149 people injured and 2,663 people still missing.
- People couldn't get access to clean water or food.
- The biggest problem was the nuclear generators being shut down and governments fearing radiation had got in to the ground and water supplies.
- Hospitals were damaged so injured people couldn't be treated properly.
- 163,000 people were in shelters around the country due to the tsunami destroying their homes and a further 70,000 had to be evacuated due to the disruption at the nuclear power plant.
- The government has estimated damage from the earthquake and tsunami at 16-25 trillion yen making it the costliest natural disaster ever.
- Thousands of schools, offices and businesses were so badly damaged that they didn't manage to re-open for up to a year after the earthquake.
- Over 190,000 homes were left without clean running water or electricity.

TASK: Using the diagrams below describe the movements of the plates and explain the hazard this could create, use labels in your answer.







TASKS:

1. What is the plate tectonic theory?
2. Define the following: natural hazard., earthquake, volcano.
3. Where do earthquakes and volcanoes occur?
4. Explain why it is important to plan for a tectonic hazard and give examples of planning methods.

Challenge: Compare and contrast the social and environmental impacts of two tectonic hazard events.