

YEAR 8 GEOGRAPHY – TERM 3

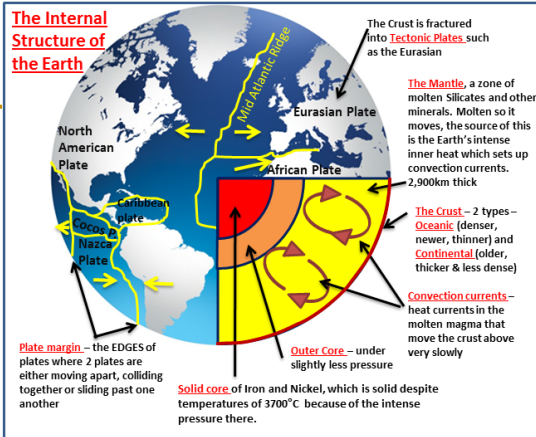
Key Words

- **Continental drift:** The movement of continents and tectonic plates which is driven by convection in the mantle.
- **Lithosphere:** The rigid outer layer of the earth made up of the upper mantle and the crust.
- **Mid-ocean ridge:** A continuous mountain range found on the ocean floor.
- **Mountain belt:** A long chain of mountains.
- **Natural disaster:** When a natural event causes great damage and loss of life.
- **Natural hazard:** When a natural event threatens to cause great damage and loss of life.
- **Ocean Trench:** A long, narrow depression on the ocean bed.
- **Ridge push:** When gravity causes the mid-ocean ridge to sink down and spread out.
- **Slab pull:** When the weight of the descending oceanic plate pulls the whole plate along and down.

The Earth's structure:

The Earth is made up of several layers.

- The outer layer is the lithosphere, it has a thin upper layer of rock, the 'crust' between 5 and 30km thick!
- Then it's the mantle which is a thicker mass of rock. They flow and deform like hot plastic.



- Below that is the outer core which is liquid rock.
- The inner core is in the centre - it's the hottest part and made of iron and nickel.

EARTHQUAKES & Volcanoes

What happens at plate boundaries?

- A plate boundary is where two plates meet.
- It is at these boundaries that most of the volcanoes, earthquakes, mountain belts and ocean landforms can be found.
- There are three types of plate boundary:
 - 1) Destructive or convergent:**
 - These occur when lithospheric plates move together. If an oceanic plate moves towards a continental one, the heavier oceanic plate sinks beneath into the mantle - this is called subduction.
 - The pressure of this sinking can cause earthquakes. The sunken plate also causes an ocean trench to form. The continental plate is forced up by the impact and forms mountains. The subducting plate can then melt creating magma which rises to the surface causing volcanoes.

Two continental plates colliding will push each other up forming mountains and earthquakes.

2) Constructive or divergent: Occurs when two plates are forced apart. Magma rises and the hot rocks melt, forming a ridge of volcanoes and new plate material. This causes the sea floor to grow and forms a mid-ocean ridge.

3) Conservative or transform plate boundaries: Plates slide past each other - friction causes the two plates to stick together and pressure builds. When the friction is overcome, the sudden movement creates a severe earthquake. No material is created or destroyed so there are no volcanoes.

Managing risk

Earthquakes:

Improvements in forecasting, safer buildings and emergency drills can reduce the number of deaths.

Guidance and support are published, such as the DROP! COVER! HOLD ON! Earthquake Drill. Earthquake resistant buildings are made in high - income countries. They include cross braced walls and shock absorbers in the foundations.

Volcanoes:

'Volcanic threat' is a measure that combines the level of hazard and the number of people exposed to it.

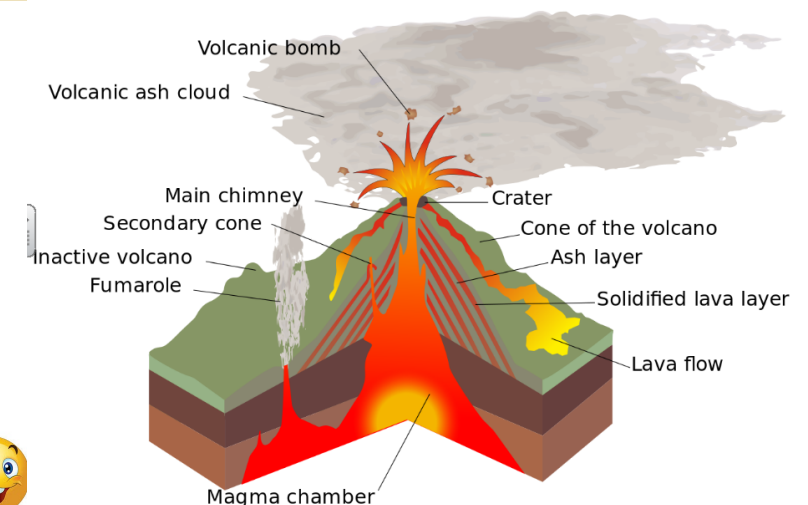
Prediction, planning and preparation can reduce the impact of eruptions. Remote sensing; land deformation and monitoring ground vibrations and gas emissions are all ways of monitoring and predicting eruptions.

Why do plates move?

The process by which plates move are still debated. There are 2 theories.

- 1) The Earth's internal heat creates a convection current in the mantle, causing the plates to move.
- 2) Movement is caused by 2 forces, slab pull and ridge push.

Features of a Volcano



10 Practice Knowledge Quiz Questions

1. What is continental drift?
2. What are the four layers of the earth?
3. What is a natural hazard?
4. What happens at a destructive plate boundary?
5. What happens at a constructive plate boundary?
6. Name 2 ways you can manage the risk of an earthquake
7. Name 2 ways you can manage the risk of a volcanic eruption
8. Name 2 features of a volcano
9. What is the lithosphere?
10. What is ridge push?

Tasks

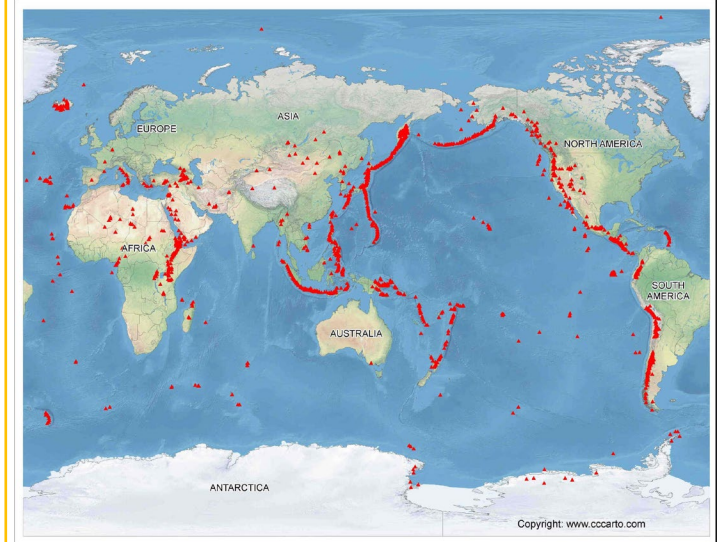
1. Draw a diagram to represent a conservative plate boundary. Make sure you annotate your diagram.
2. Design an earthquake survival kit. Think about what you would need to have if you needed to evacuate.



3. Research a volcanic eruption. Create a fact file about where the eruption happened, what plate boundary caused the eruption and what the impacts were from the volcanic eruption.

Exam Question Practice

Describe the location of volcanoes around the world (3 marks)



Explain the difference between constructive and destructive plate boundaries (2 marks)