

**Student Notes: Unit 4- From Continental Drift to Plate Tectonics**  
**Part 3 – Volcanoes**

**What is a Volcano?**

- A volcano is an opening in earth's crust which molten rock, gases and ash erupt through as well as the landform that develops around it.
- A volcanist is a person who studies the history and phenomena of volcanoes.

**Magma Formation**

- Magma is hot molten rock that forms beneath earth's surface.
- Magma's density is lower than the solid material in the uppermost portion of the asthenosphere so it rises.
- The pressure that is exerted by the lithosphere found just above the asthenosphere causes the magma to be pushed up through the crust of the earth.
- Magma forms in large amounts in 3 places in earth's crust. They are:
  - Convergent, subduction boundary zones
    - these can be oceanic & continental plates converging or oceanic & oceanic plates converging.
  - Divergent boundaries
  - Hot spots

**Note taking Activity: Magma Formation at Volcanic Areas**

**\*Make sure you complete the work given for this section to complete your notes on this topic. The following topics are what were covered in this section.**

- What occurs at each volcanic area?
- What does each volcanic area look like.
- What causes magma to form in large amounts here?
- Examples of rock(s) that form here.
- Example(s) of where these areas would be found in the world.
- Interesting facts about each volcanic area.
- What is a deep-sea trench, how is it formed?
- How is magma released at each boundary?
- How were the Hawaiian islands formed?
- What is a seamount?

**Lava:**

- Lava is magma that reaches earth's surface.
- There are 3 types of lava flows:
  - Pahoehoe – lava with smooth, ropelike surfaces. It occurs when lava is at a high temperature which causes it to flow quickly.
  - AA – lava with rough, jagged surfaces. It occurs when lava is cooler which causes it to flow slower.
  - Pillow lava – erupts in water or flows to water and has a rounded, pillow-like form with a hard crust that eventually bursts causing more lava to pour out into another pillow-like form making a mass of lumps.

## **Note Taking Activity: Lava and Types of Volcanoes**

**\*Make sure to complete the work given for this section to complete your notes on lava and different types of volcano landforms.**