

## Volcanic Activity Revision Notes

### Volcano

- Volcanoes form when molten magma stored in a magma chamber reaches the surface through a narrow vent
- The lava hardens around the vent to form a cone shaped mountain
- Eruptions are often violent, releasing ash, smoke, steam and lava

(Hint: Magma (mantle) underground, Lava (land) above ground)

### Lifecycle of a volcano

- Active: Erupts regularly e.g. Mt. Etna, Sicily
- Dormant: It has been quiet for a long time but could erupt again e.g. Mt. St. Helens, USA, erupted after 120 years
- Extinct: Has not erupted in historic times e.g. Slemish Mountain, Co. Antrim

### The Pacific Ring of Fire

This is an area around the Pacific Ocean where some of the world's plates meet. It causes a lot of major earthquakes and volcanic activity.

#### Case Study: Volcanic Eruption

(Marking Scheme: 10 marks)

What? Mt. St. Helens dormant volcano erupted after 120 years. (2 marks name it)

Where? Rocky Mountains, USA.

When? March 1980.

Why? It is on a plate boundary.

Causes? Small earthquakes and some lava flows. (4 marks outline what happened)

One side of the volcano swelled to 100 m. (2 statement, 2 explaining it)

Massive eruption.

Effects? Negative? Mountain reduced by 400 m (2 marks negative effect)

Crater of 3 km created (1 statement, 1 explaining it)

25 km of trees destroyed

Melted snow and ash mixed to form a mudflow

60 people killed

Positive? Disaster tourists attracted to the area

(2 marks positive effect)

Land becomes very fertile which is good for farming

(1 statement, 1 explaining it)

Precious stones and minerals are formed

Geothermal energy and hot springs are created

### Mid – Atlantic Ridge

- The Mid – Atlantic ridge is occurring as the North American and the Eurasian plates pull apart
- It is also called a fissure eruption
- The magma spreads out slowly onto the seabed
- It cools and hardens
- A chain of volcanic mountains is formed

- If the volcanic mountains reach the surface they are known as volcanic islands e.g. Iceland

#### Volcanic island: Iceland

- Iceland is found along the Mid – Atlantic Ridge
- Iceland is the youngest country on Earth
- Its water is heated underground by volcanic activity and it is used in people's homes and in factories
- This is called geothermal energy
- Iceland also has hot springs used for bathing