

PowerPoint 1: Volcanoes & Plate Tectonics

Slide 1: Title Slide

Volcanoes and Plate Tectonics
Earth Sciences, by YOUR NAME

Slide 2: Two Content (Pic Left)

Slide Heading: Volcanism

- Melted rock is called magma
- Lava is magma that erupts up onto the earth's surface
- Movement of magma toward or onto the surface of the earth is called volcanism

Slide 3: Two Content (Pic Right)

Slide Heading: Volcanoes

- Molten rock flows onto the earth's surface through vents
- Volcanoes are the structures formed by vents

Slide 4: Two Content (Pic Left)

Slide Heading: Subduction Zones

- Where one plate moves under another
- The Pacific Ring of Fire is an area encircling the Pacific Ocean
- This is a major area of volcanoes caused by subduction plates

Slide 5: Two Content (Pic Right)

Slide Heading: Mid-Ocean Ridges

- Magma surfaces where plates move apart along mid-ocean ridges
- Most eruptions along mid-ocean go unnoticed
- Middle of Iceland has large fissures

Slide 6: Two Content (Pic Left)

Slide Heading: Hot Spots

- Magma can surface within interiors of lithospheric plates
- These areas are called hot spots
- Hawaiian Islands are formed over a hot spot

Slide 7: Two Content (Pic Right)

Slide Heading: Volcanic Eruptions

- *Mafic* lava flows freely and forms much of the oceanic crust

- *Felsic* lava contains silica and forms much of the continental crust

Slide 8: Two Content (Pic Left)

Slide Heading: Kinds of Eruptions

- Mafic lava eruptions tend to be quiet and lava flows like a red-hot river
- Felsic lava eruptions are explosive and send molten and solid particles shooting into the air

Slide 9: Two Content (Pic Right)

Slide Heading: Pyroclastic Material

- Volcanic ash are particles less than 2 mm in diameter
- Volcanic dust are particles less than .25 mm
- Lapilli are larger fragments, less than 64mm

Slide 10: Two Content (Pic Left)

Slide Heading: Types of Volcanoes

- Shield volcanoes: broad at the base with sloping sides.
- Cinder cones: made of ejected fragments
- Composite volcanoes: consist of fragments and hardened lava

Slide 11: Two Content (Pic Right)

Slide Heading: Craters and Calderas

- Craters are funnel-shaped pits at top of volcanic vent
- Craters are formed when material is blown out of volcano
- Calderas are large, basin-shaped depressions from collapsed craters

Slide 12: Two Content (Pic Left)

Slide Heading: Predicting Eruptions

- Small earthquakes
- Temperature changes within rocks
- Bulging of surface
- Changes in gas given off by volcanoes
- Previous patterns