

## Earth Science Chapter 7: Study Guide

### Section 1

- Definitions

Volcano	Lava	Island arc
Magma	Ring of Fire	Hot spot

- Know where magma and lava are located in relation to Earth's surface
- Know where volcanoes can be located on Earth's surface
- Know where most volcanoes form
- Know why volcanic belts occur
- Know where volcanoes form along convergent and divergent boundaries
- Know what types of plates are involved when volcanoes can be formed
- Know what hot spots are, where they can form and what they can create

### Section 2

- Definitions

Element	Chemical property	Pahoehoe
Compound	Viscosity	aa
Physical property	Silica	

- Know about Hawaii and what makes it unique in terms of volcanic activity
- Know the difference between an element and a compound and at least one example of each
- Be able to differentiate a physical property from a chemical property
- Be able to list at least one example of a physical and a chemical property
- Know what viscosity is and how it relates to flow speed
- Know why liquids have different viscosities
- Know what the viscosity of magma depends upon
- Know what viscosity results depending on the silica content
- Know what viscosity results depending on the temperature
- Know the temperature range of magma
- Know the two different types of lava and why they differ

### Section 3

- Definitions

Magma chamber	Lava flow	Dormant
Pipe	Crater	extinct
Vent	Pyroclastic flow	

- Know where magma usually forms
- Know why magma rises to the surface and how it may get there
- Be able to label a diagram of a volcano
- Know what happens to dissolved gas bubbles in magma as it rises
- Know what happens when a volcano erupts
- Know the differences between the two classifications of volcanic eruptions
- Know what determines how a volcano erupts
- Be able to list at least one example of each type of volcanic eruption

- Know the different fragments that are created when lava cools and is broken
- Be able to list at least one rock that is created from these eruptions
- Know what type of damage can be created from both types of volcanic eruptions
- Know the life cycle of a volcano and what is occurring during each stage
- Know the history of volcanic eruptions (timeline on page 214-215)
- Know how scientists can predict volcanic eruptions
- Know the limitations of the predictions that scientists can make about volcanic eruptions

#### Section 4

- Definitions

Shield volcano	Volcanic neck	Geothermal activity
Cinder volcano	Dike	geyser
Composite volcano	Sill	
Caldera	Batholith	

- Know what some of the surface features that volcanoes have created
- Be able to compare and label diagrams of the four landforms created from lava and ash
- Know what landform is created by the collapse of a volcanic mountain
- Know the steps of the formation of a caldera
- Know why a person might chose to live near a volcano despite the obvious dangers
- Be able to compare and label diagrams of the five landforms created from magma
- Know what geothermal means in Greek
- Know what happens in geothermal activity
- Know the differences between the two types of geothermal activity
- Know what geothermal energy is, how it works and what it can be used for