

# SIO 15 LECTURE 09: VOLCANOES AND PLATE TECTONICS

Leftovers from Lecture 8

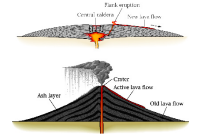
<http://www.volcano.si.edu/>

**Volcanic Material and Hazards**

**Review short Videos 8-2a,b,c**

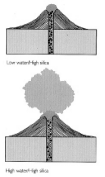
**The two Principal Types of Volcanoes**

**watch short video 9a**



**Styles of Volcanism and the 3 Vs**

**watch short video 8-1**



**Plate Boundaries and Volcanism**

Mid-ocean Ridges

Rifts and Intra-plate Hotspots



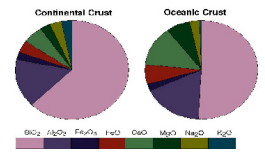
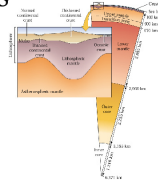
Subduction Zones

Plate Boundaries with NO volcanism

# Viscosity and volcanism

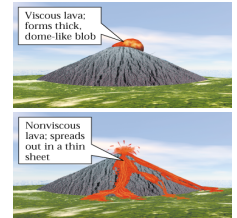
(watch short video 9b) Crustal Rock Viscosity

Crustal Rock Viscosity: Continents and Oceans

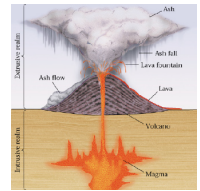


## The 2 Factors controlling Viscosity

(watch short video 9a)



Magma and Lava (watch short video 9b)  
Rocks and Minerals (watch short video 9b)

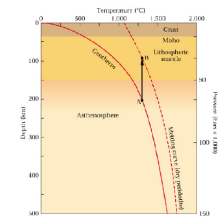


The Geotherm [please download special handout!](#)

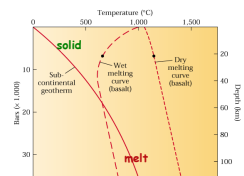
(watch short video 9c)

## Earth's Two Principal Melting Mechanisms

Decompression Melting



Injection of Volatiles



## Magma Minerals and Partial Melt

