

Chapter 12   
Concepts you should know for the exam

- Texture -- grain size of intrusive (granite) and extrusive rocks (basalt)
- Relative cooling rates of intrusive and extrusive rocks
- Rocks from lavas vs. pyroclastic rocks
- Mafic, intermediate and felsic rocks
- Know following:  
(Temperature, SiO<sub>2</sub> content, Sodium and potassium content, Iron, magnesium and calcium content)
  
- Melting point as a function of chemistry, pressure and water content
- Partial Melting of magma-generating rocks
- Fractional Crystallization
- Shapes of magmatic bodies--- sills, dykes, batholiths
- Hot spots and volcanoes (mafic composition)
- Volcanoes at convergent margins (mafic to felsic composition)
- Volcanoes at divergent margins ("oceanic ridges") (mafic composition)
- Lavas, welded tuff, vesicular basalt, volcanic bombs, pyroclastic flows, volcanic cloud
  
- Relation between shape of volcano, its composition, chemistry of lavas and viscosity of lavas that form the volcano type .... Shield volcano... Cinder Cone volcano and Composite volcano
  
- Dangerous pyroclastic flows cause almost 30 % of fatalities from natural disasters versus tsunamis (about 20%)