GS104 Lab Quiz 2 Study Guide

1. Review answer keys for Homework 4, Lab 5, Lab 6, Lab7
2. Make sure you know how to do unit conversions and work algebraic problems
3. Go to the online rock and mineral study guides, view and know your rocks and minerals
4. Study the terms and concepts listed below, both from your lab exercise and textbook.
5. Go over your pre-lab questions

Key Terms and Concepts:

Plate Tectonics Lab

Plate boundaries
Lithosphere
Ashtenosphere
Divergent
Convergent
Transform
Subduction zone
Trench
Volcanic arc
Hot spot
Asthenosphere
Inner core
Outcore
Mantle
Crust
Moho
Volcano
Earthquake
Ring of Fire
Emperor-Hawaiian Hot Spot
Track
Juan de Fuca Plate
Pacific Plate
North American Plate
Interplate earthquakes
Intraplate earthquakes
Strike slip fault
Fault offset
Fault displacement
San Andreas Fault Zone
Cascade Mountains
Cascade Volcanic Arc
Rock age

Earthquakes Lab

p-wave
s-wave
L-waves
surface wave
seismogram
seismograph
travel-time curves
focus
epicenter
body waves
surface waves
distance to epicenter
seismic station
triangulation
longitude (east-west)
latitude (north-south)

Minerals Lab

Element
Mineral
Rock
Atom
Hardness
Cleavage
Luster
Color
Streak
Heft
Density
Hardness
Fracture
Crystal form
Magnetism
Taste
Effervescence
Metallic
Non-metallic
Glassy
Conchoidal fracture
1-direction cleavage (sheets)
2-direction cleavage (square)
3-direction cleavage (cubes)
density = mass/volume
high density sinks
low density floats
hardness fingernail = 2.5
hardness penny = 3.5
hardness nail = 6
hardness glass = 5.5
important minerals:
quartz
feldspar
mica
amphibole
galena
pyrite

Rock Lab

phaneritic
aphanitic
porphyritic
felsic
mafic
magma
lava
pegmatitic
pophyritic
glassy
frothy
texture
mineral composition
felsic
mafic
intermediate
glassy
frothy
vesicular
important rocks:
granite
rhyolite
diorite
andesite
gabbro
basalt
pumice
scoria
obsidean

Key Lab Concepts / Skills

What is the difference between a silicate and non-silicate mineral? Include some answers.
What is density and how is it calculated?
What are the three main classes of rocks and how do each of them form?
Draw and label a diagram of the rock cycle. Be sure to show the three classes of rocks and how the relate with one another.
What is the difference between an extrusive and intrusive igneous rock?
Can you identify felsic, mafic, intermediate igneous rocks?
Can you make mineral observations and use the mineral identification keys?
Can you calculate the rate of plate motion from a hot spot track?
Can you calculate the rate of offset along a fault given a map, map scale, and ages of rocks?
Can you sketch the three types of plate boundaries?
Can you locate the epicenter of an earthquake using the travel time curves?