

## ES104 Lab Quiz 1 Study Guide – Fall 2005

1. Review answer keys for Homework 1, Lab 1, Lab 2, Lab3, Lab4
2. Make sure you know how to do unit conversions and work algebraic problems
3. Study the terms and concepts listed below, both from your lab exercise and textbook.
4. Go over your pre-lab questions; use answer keys to study for quiz

### ***Key Terms and Concepts:***

Open System

Closed System

Isolated System

Is the Earth and open, closed or isolated system, why or why not?

What is the distance from the Earth to the moon? How long does it take the moon to revolve around the Earth?

Waxing moon

Waning moon

Full Moon

New Moon

Aphelion

Perihelion

Which planet is closest to the sun?

list the planets in order of increasing distance from the sun.

Which planet is farthest from the sun?

Which planet is the largest in the solar system?

Which planet is covered in water?

Which planet is the hottest planet?

Define and calculate frequency and wavelength; how are they measured? What are their units?

what is the speed of light in meters per second?

list the colors of the visible light spectrum from shortest to longest wavelength.

write the equation for velocity as a function of distance and time.

How far is the sun from the earth in miles? How about kilometers?

If you were traveling at the speed of light, how long would it take you to get from the sun to the earth?

Can you sketch and identify the phases of the moon?

Do you know the mechanics of the moon phases?

Lunar orbital period? How long?

Lunar rotational cycle? How long?

Which way does the earth and moon rotate? How about revolve around the sun?

Can you sketch and identify the seasons in relation to the Earth and Sun orientation?

What is the tilt of the Earth's axis relative to the plane of the ecliptic?

What is the difference between an astronomical unit and a light year?

What is Density, what is the formula, can you calculate the density of an object?

Can you classify the planets according to their physical properties?

Do you know the basic physical characteristics of each of the planets? Can you match them to the planet?

How does the speed of sound compare to the speed of light? What is the speed of light?

How does the speed of light compare to wavelength and frequency?

Can you calculate the velocity of a sound wave?

Can you calculate how long it will take light to travel from a star that is 10,000 astronomical units away from the Earth?

Do you know ROYGBIV?

What is a continuous spectra?

What is a discrete spectra?

What is an absorption spectra?

What is a bright line spectra?

How can spectral analysis be used to characterize stars?

***Key Terms and Concepts:***

***Plate Tectonics Lab***

Plate boundaries  
Lithosphere  
Asthenosphere  
Divergent  
Convergent  
Transform  
Subduction zone  
Trench  
Volcanic arc  
Hot spot  
Asthenosphere  
Inner core  
Outer core  
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

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?