

Chapter 3 Study Guide

For the Chapter 3 test, make sure that you familiarize yourself with the following concepts and be able to solve problems.

- What are characteristic properties? Name the ones that we have talked about.
- What is density?
- What are the units for density?
- What is the formula for density?
- How do you determine the density of a solid?
 - Regular Shaped Objects
 - Irregular Shaped Objects
- How do you determine the density of a liquid?
- How do you determine the density of a gas?
- What is the relationship between the density of a substance and the volume of various samples of the same substance?
- Be able to EXPLAIN what it is you did in each of the 3 density labs.
- A student performs the density of a gas experiment and finds the following information.

Mass of solid, test tube, and water before reaction.....	40.24 g
Mass of test tube and contents after reaction.....	39.67 g
Volume of gas collected.....	444 cm ³

Determine the density of the gas.

- A cork has a density of 0.1875 g/cm³ and a volume of 16 cm³. Calculate the mass of the cork.
- A lead cylinder has a mass of 540 grams and a density of 2.70 g/ml. Calculate the volume of the lead cylinder.
- What is freezing point?
- How did we determine the freezing point in the lab?

- Why did we use the water bath during the experiment?
- Did the freezing point depend on the amount of material we had in the lab? What about boiling point?
- Explain freezing, melting and boiling in terms of particle movement and the amount of space the particles take up.
- What is melting point?
- What can be said about the freezing point and the melting point?
- How did we determine the boiling point in the lab?
- Why did we place the empty test tube in the beaker of water?
- Why were boiling chips added to the test tube?
- DRAW and label a change of state graph of water.
- What does the plateau represent on the change of state graph?
- How would you know if 2 objects are made of the same material? Is there more than one way to determine that?
- Make sure to check out the powerpoint that are posted on my website about the freezing and boiling labs.