

Chapter 13 Condensed States of Matter Writing Assessment

For this unit you will not be taking a written test. Instead, you will spend time in the lab observing six different demonstrations designed to teach you about intermolecular forces and how they determine physical properties of solids and liquids.

You will submit your assignment through Turn It In (dot com). It is important that you write in your own words, and that you do not copy anything from the Internet. Use this assignment as a way to learn all the details involving intermolecular forces.

Station 1

Investigate the evaporation rates of water, methanol, and acetone. Describe the results and give an explanation using IMF concepts.

Station 2

Explore the wet bulb vs. dry bulb idea using water, methanol, and acetone. Describe the results and give an explanation using IMF concepts.

What is relative humidity and how is it measured? (Use the internet and your own words.)

Station 3

Why does the second beaker contents turn pink? Use your common compounds sheet to look up the difference between NH_3 and NH_4^+ . Describe what's going on here.

Station 4

This station shows water boiling with all three phases present. Use your internet resources to learn how this is possible and explain what's going on.

Station 5

At this station solid iodine is going right to a gas and then back again. Use your vast resources to determine what that's called (both processes) and explain it in terms of IMF concepts.

Station 6

At this station use the cups to explore the surface tension of water. Try floating a paper clip. Let water build up over the edge of the cup and then break the surface tension with a drop of detergent. Describe at least three different things you tried while investigating the surface tension of water.