

Name: \_\_\_\_\_ Pd: \_\_\_\_\_ Date: \_\_\_\_\_

## 1.2 – Matter & the Properties of Matter Activity

This activity is designed to apply the notes you took on matter and its properties in section 1.2 of the book. It will be important to have your completed notes with you in your group and one book per group will likely be helpful as well.

You will travel around to each lab “station” and record answers or thoughts to the questions asked on this page. The goal is that your recorded thoughts and answers should be complete and thorough enough to describe your work to someone who wasn’t in class today. This should be completed by the end of class and turned in. You do not necessarily need to go in order, but you should complete all stations.

### **Station #1 - Matter**

1. **Matter**: Using your definition and understanding of matter, list as many things as your group can identify within a 1 foot radius of the lab station that you would consider to be “matter.”
  
2. **Mass**: Describe if and how the object at this table has mass. Determine if there is a way to quantify (measure) the mass of this object using any tools in the room. If it is possible, determine the mass of the object to the nearest 0.01 gram. Otherwise, take a guess...

### **Station #2: Atom, Element, and Compounds**

3. Use the model kits at this station to create (or identify) and then sketch what you believe are good representations of each of the words below. The goal is to use the model to show how these terms relate to each other.
  - a. Atom
  
  
  
  
  
  
  
  
  
  
  - b. Element
  
  
  
  
  
  
  
  
  
  
  - c. Compound

**Station #3 – Properties 1**

4. Extensive vs. Intensive Properties: Observe the familiar substance at this station. Using the tools in the room and previous knowledge, identify at least 3 extensive and 3 intensive properties of this substance.

<b>Extensive Property</b>	<b>Intensive Property</b>

5. Physical Property: Choose a different item from this lab station and list at least 2 physical properties of it, including an explanation of why they are physical.
6. Physical Change: Try to cause a physical change using the materials at this station. NOTE or SKETCH what you do to make the physical change.
7. Change of State: Describe one thing in the room that is in a solid state, one thing that is in liquid state, and one thing in gaseous state (try to be more creative than what I'm expecting you to come up with, as possible).

**Station #4 – Properties 2**

8. Chemical Property: Choose one item from this lab station and list at least 2 chemical properties of it, including an explanation of why they are chemical.

9. Chemical Change: Create a chemical change using the materials at this station. Be safe...

10. Do you think energy was conserved when you created the chemical change? What is your evidence that it either was or was not conserved?

### **Station #5 – Mixtures**

11. Which of the two mixtures on this table are heterogeneous? Which one is homogenous? How can you tell?

12. Which mixture(s) could you separate if you wanted to? How would you do it? Describe or draw a diagram for your answer.

### **Station #6 – Pure Substances**

13. Which of the two materials at this station represents a pure substance?

14. What makes this material a pure substance?

Once you have completed all the stations and answered all the questions, return to your seats and start reading through section 1.3 (p. 20-24) in the book.