Name: Date: Block:

Lab: Identifying Elements, Compounds, and Mixtures

Directions: Read through the review chart below and answer the pre-lab questions. Then, rotate through the stations, identifying each substance as an element, compound, or mixture. If it is a mixture, be sure to include whether it is **homogeneous** or **heterogeneous**.

Element	Compound	Mixture
•Made of ONE kind of atom (found on the periodic table) • Cannot be separated into any simpler form chemically or physically	• Made of 2 or more kinds of atoms chemically combined in a certain ratio (e.g water molecule is 2 hydrogens and one oxygen atom)	• 2 or more elements or compounds mixed together physically. • Not chemically combined! • Each part keeps its own chemical identity • Can be **heterogeneous** (different throughout) or **homogeneous** . (the same throughout)

Pre-Lab Questions

1. What is the difference between an element and a compound?

2. How is a heterogeneous mixture different from a homogeneous mixture?

3. Which can be found on the periodic table: elements, compounds or mixtures?

Station #	How does it look?	Classify
1. **Oil and Water** **(Mixture)**		**Homogeneous or Heterogeneous?**
2. **Copper Wire** **(Pure Substance)**		**Element or Compound?**
3. **Chalk ($CaCO_3$)** **(Pure Substance)**		**Element or Compound?**
4. **Rocks and Sand** **(Mixture)**		**Homogeneous or Heterogeneous?**
5. **Food coloring and Water** **(Mixture)**		**Homogeneous or Heterogeneous?**
6. **Water** **(Pure Substance)**		**Element or Compound?**

Conclusion Questions: Complete the sentences.

1. **Oil and water is a _____ mixture. I know this because _____**

   _____

2. **Copper wire is an _____ . I know this because _____**

   _____

3. **Chalk ($CaCO_3$) is a _____. I know this because _____**

   _____

4. **Rocks and sand is a _____ mixture. I know this because _____**

   _____

5. **Food coloring and water is a _____**

   mixture. I know this because _____

   _____

6. **Water is a _____. I know this because**

   _____

   _____