**Chemistry 1: Study Guide NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BLOCK: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**TERMS & CONCEPTS**

Directions: Identify the meaning and/or importance of the following concepts. Write 1-3 sentences for each.

|  |  |  |
| --- | --- | --- |
|  | **TERM** | **DEFINITION** |
| **1** | **element** |  |
| **2** | **valence electron** |  |
| **3** | **suspension** |  |
| **4** | **heterogeneous mixture** |  |
| **5** | **homogeneous mixture** |  |
| **6** | **atom** |  |
| **7** | **Halogens** |  |
| **8** | **Noble Gases** |  |

**REFLECTION QUESTIONS:**

**9. Explain the difference between an atom, molecule, and compound.**

**10. Explain the structure of an atom, including the 3 particles that make it up, their location, their charge, and what each tell us about the atom.**

**11. What is the difference between a solvent, solution, and solute?**

**12. What is the difference between pure substances and mixtures?**

**13. What physical method would be useful to help separate dissolved sugar from a glass of water?**

**14. Explain how the periodic table is organized, using the following terms:** *period, group, atomic number, valence electron, valence shell*

**15. Which groups on the periodic table are the most reactive and the least reactive? Explain why for both.**

**16. What does the atomic mass number tell us about an atom?**

**17. What 2 things do elements within the same group have in common?**

**18. Which group on the periodic table is responsible for making hard water?**

**19. Which group on the periodic table is responsible for eutrophication?**

**20. Describe each type of element by providing 4 facts about each:**

**Metals:**

**Nonmetals:**

**Metalloids:**