**Chapter 1, Section 3 Chemistry I Honors**

1. Each element has its characteristic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Elements are organized into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of elements with similar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. This organization is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Each small square shows the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for the element and the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Vertical columns are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which are number \_\_\_\_\_ through \_\_\_\_\_. Each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ contains elements with similar chemical properties.
6. Horizontal rows of elements are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Physical and chemical properties change \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ across a period.
7. Two sets of elements below the periodic table make up the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ series.
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are towards the left side of the periodic table.
9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have a shiny, metallic luster.
10. A metal is an element that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
11. Most metals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at room temperature.
12. Metals are malleable, which means they \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
13. Metals are ductile, which means they \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are towards the right side of the periodic table.
15. Nonmetals exist as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at room temperature.
16. A nonmetal is an element that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
17. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are found between metals and nonmetals.
18. A metalloid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
19. All metalloids are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at room temperature.
20. Metalloids are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ malleable than metals but not as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as nonmetals.
21. Some metalloids have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ luster.
22. Metalloids are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of electricity.
23. Noble gases are in group \_\_\_\_\_ and are generally \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
24. Which noble gases are used in lighting?
25. Which noble gas is used in balloons?

**States of Matter Review**

**Part I Directions:** Identify the state of matter that is described in each statement: **solid**, **liquid**, or **gas**.

1. Particles have definite shape and definite volume.
2. Particles have definite volume.
3. Particles do not have definite shape or volume.
4. Particles are highly ordered.
5. Particles are far apart and moving very fast.
6. Particles flow freely past each other.
7. Particles are the most compressible.
8. Particles vibrate in place but do not move freely.
9. Particles are usually closest to each other in this state of matter.
10. Particles take on the shape of their container.

**Part II Directions:** Identify the change of state that is described.

1. solid → liquid
2. liquid → gas
3. liquid → solid
4. solid → gas

**Think About:** What is the change of state called in which a gas becomes a solid?

