

## Periodic Table Basics

Name \_\_\_\_\_

1. Which elements had complete outer shells (8 valence electrons)? Give the name and symbol for each.

\_\_\_\_\_

What do you notice about the location of these elements?

2. Which elements had only one valence electron? Give the name and symbol for each.

\_\_\_\_\_

What do you notice about location of these elements?

3. What do you notice about the number of valence electrons as you move from left to right across a row or period in the periodic table? (Na →Mg→Al →Si →P→S→Cl→Ar)

4. What do you notice about the number of energy levels or shells as you move down a group or column in the periodic table? (H → Li → Na)

5. Record the number of valence electrons for each family/group.

Alkali Metals- \_\_\_\_\_ valence electrons

Nitrogen Family - \_\_\_\_\_ valence electrons

Alkaline Earth Metals \_\_\_\_\_ valence electrons

Oxygen Family - \_\_\_\_\_ valence electrons

Boron Family \_\_\_\_\_ valence electrons

Halides - \_\_\_\_\_ valence electrons

Carbon Family \_\_\_\_\_ valence electrons

Noble Gases - \_\_\_\_\_ valence electrons

6. What do you notice about the location of the elements in each family?

7. Why is hydrogen not colored? (Explain its family & period).

8. In what family would each of these elements be classified?

Radium - \_\_\_\_\_ Tin - \_\_\_\_\_

Iodine - \_\_\_\_\_ Cesium - \_\_\_\_\_

9. Predict the number of valence electrons for each element based on its location in the Periodic Table of Elements. You will need to use the table in your textbook or notebook.

Barium = \_\_\_\_\_ Lead = \_\_\_\_\_ Bismuth = \_\_\_\_\_ Potassium = \_\_\_\_\_