

**Questions:**

1. Which elements had complete outer shells? Give name and symbol for each. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What do you notice about the location of those elements? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Which elements had only one valence electron? Give the name and symbol for each. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What do you notice about the location of these elements? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What do you notice about the number of valence electrons as you move from left to right across the row or period in the periodic table? (Na🡪Mg🡪Al🡪Si🡪 P🡪 S🡪 Cl🡪 Ar) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. 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) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Write the name of each family at the top of the column on your periodic table using the following information:

* Alkali Metals – 1 valence electron Halogens - 7 valence electrons
* Alkali Earth Metals - 2 valence electrons Noble Gases - Complete outer shells
* Boron Family – 3 valence electrons Carbon family – 4 valence electrons
* Oxygen family – 6 valence electrons

1. What do you notice about the location of the elements in each family? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. In what family would you classify hydrogen? Explain your choice. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Predict the number of valence electrons for each element based on its location in the periodic table.

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