

Periodic Table Basics

Name _____

1. Which elements had complete outer shells? 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. Write the name of each family at the top of the columns on your periodic table using the following information.

Alkali Metals - 1 valence electron

Nitrogen Family - 5 valence electrons

Alkaline Earth Metals - 2 valence electrons

Oxygen Family - 6 valence electrons

Boron Family - 3 valence electrons

Halides - 7 valence electrons

Carbon Family - 4 valence electrons

Noble Gases - Complete outer shells

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

7. In what family would you classify hydrogen? Explain your choice.

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.

Barium = _____

Lead = _____

Bismuth = _____

Potassium = _____