

Periodic Table Basics

Name: _____ Date: _____

- This worksheet is to be completed based on your Bohr diagram activity

1. Which elements had complete outer shells? Give the name and symbol for each.

_____ , _____ , _____

2. Which elements had only one valence electron?

_____ , _____ , _____

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 as you move from **top to bottom** down a **column** or **group** in the periodic table? (H → Li → Na)

5. Elements are organized into families according to their physical and chemical properties. Identify the elements that you used in step 3 that belong to each family based on the number of valence electrons. Give the name and symbol for each element.

Alkali Metals (1 valence electron): _____ & _____

Alkaline Earth Metals (2 valence electrons): _____ & _____

Boron Family (3 valence electrons): _____ & _____

Carbon Family (4 valence electrons): _____ & _____

Nitrogen Family (5 valence electrons): _____ & _____

Oxygen Family (6 valence electrons): _____ & _____

Halides (7 valence electrons): _____ & _____

Noble Gases (Complete Outermost Shells): _____ , _____ &

6. How would you classify Hydrogen? Why?

7. Predict the number of valence electrons for each element based on its location in the Periodic Table of Elements. Look at your periodic table.

Barium = _____ Lead = _____ Xenon = _____ Potassium = _____