

1. Which 3 elements had enough electrons to complete their outer shells? Give the name and symbol for each.

2. Where is the location of all the elements in question 1?

3. Which 3 elements had only one valence electron?

4. What do you notice about the location of all the elements in question 3?

5. 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)

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. Elements are organized into groups according to their physical and chemical properties. Fill in the table below with the elements that you used today based on the number of valence electrons. Give the name and symbol for each element.

Alkali Metals Group= 1 valence electrons			Hydrogen H
Alkaline Earth Metals = 2 valence electrons			
Boron Group = 3 valence electrons			
Carbon Group = 4 valence electrons			
Nitrogen Group = 5 valence electrons			
Oxygen Group = 6 valence electrons			
Halides Group = 7 valence electrons			
Noble Gases = Filled outermost shell			Helium He

8. What relationship is there between the location of an element on the periodic table and its number of valence electrons?

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 periodic table.

Barium = _____ Xenon = _____ Potassium = _____