

Name : _____

The purpose of this activity is to become familiar with the elements and the periodic table.

A. Getting Organized

- The elements are arranged in order of increasing _____.
- Columns of elements belong to the same _____.
- Rows of elements belong to the same _____.
- The atomic number is equal to _____.
- The atomic mass = _____ + _____.
- The number of electrons = _____ in a neutral atom.
- When dealing with the first three rows of the periodic table:
The maximum number of electrons in the first orbital is _____
The maximum number of electrons in the second orbital is _____
The maximum number of electrons in the third orbital is _____
- Electrons in the outermost orbit are called _____ electrons.

B. Valence Electrons

Complete the following abbreviated periodic table for the elements as shown in the example. (The number in the top left corner of each box refers to the element's atomic number).

1	Example: Representation of the number of e-'s In each energy level						$2e^-$ $8e^-$ $2e^-$ Mg Atom	← Valence electrons ← second energy level ← first energy level ← # protons in nucleus ← atom symbol	2
3	4		5	6	7	8	9	10	
11	12		13	14	15	16	17	18	

- What is the relationship between the family number and the number of valence electrons?

- What is the relationship between the period number and the number of orbital shells in which they are located?
