

Name _____

Electron Configuration Activity

Today we are going to use M&M's to represent electrons, when assigning the electron configuration for individual atoms. Use the handout with the model of energy levels and a brief review of electron configuration. The goal of this activity is to notice a pattern between elements.

1. Using M&M's to represent electrons place the correct amount of electrons in the proper energy level and Orbits. Do this for the first 20 elements, and write the amount of electrons in the highest energy level for that atom.

Element Atomic Number	Element Name	Electrons in inner Energy level	Amount of Electrons in highest energy level (Valence)	Total Electrons (will equal atomic number)
1	Hydrogen			
2	Helium			
3	Lithium			
4	Beryllium			
5	Boron			
6	Carbon			
7	Nitrogen			
8	Oxygen			
9	Fluorine			
10	Neon			
11	Sodium			
12	Magnesium			
13	Aluminum			
14	Silicon			
15	Phosphorus			
16	Sulfur			
17	Chlorine			
18	Argon			
19	Potassium			
20	Calcium			

Now that you have modeled the electron configuration for the first 20 elements, what pattern(s) have you noticed about the number of electrons in the highest energy level between elements?

The electrons in the highest energy level are known as Valence Electrons. Using the pattern that you have noticed, Identify how many valence electrons Iodine (53) would have?

How many valence electrons would Arsenic (33) have?