**Correlating Periodic Table Groups with Valance Electron**

Purpose:

* Give students group practice on drawing Bohr Models
* Applying understanding of filling electron shells to predict the number of valance electrons.
* Relate position on the periodic table with number of valance electrons.

Discussion:

Materials:

* Pipe cleaners (12 per group)
* Pony beads (20 per group)
* Two colors of soft pom-pom (10 of each color).
* One pre-made sample of an atom.
* Student Group Lists
* Element Lists
* Projector
* Whiteboard
* Dry-Erase Markers

Procedure:

Before Class:

* Divide class into student groups.
* Divide elements into lists for students. (Be sure that each group of students has elements from many different groups.)
* Create a carbon atom model.
  + - Pipe cleaner – Electron Orbital
    - One color of soft pom-pom - Protons
    - Other color of soft pom-pom – Neutrons
    - Pony beads - Electrons

During Class:

* Divide students into groups of three and have groups collect the needed materials.
* Give each group a list of elements to draw Bohr models. Do not use the transition metals
* Have each group predict the valance electrons present in an atom of that element.
* Check for correct atom model formation and number of valance electrons.
* Place a large periodic table with only the atomic symbols in an easily accessible place.
* Have the students write the correct numbers of valance on the blank periodic table on the board.
* As a large group, note trends on the periodic table.

Groups

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| Beth  Cinthia  Luis R.  Darrius  Luis G. | MaryCruz  Jonathon D.  Johnathon S.  Herendira | Adrian  Cristian  Brianna  Llaritza |
| Hydrogen  Beryllium  Nitrogen  Neon  Aluminum  Sulfur | Helium  Boron  Oxygen  Sodium  Silicon  Chlorine | Lithium  Carbon  Fluorine  Magnesium  Phosphorous  Argon |

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