**Periodic Table Unit Objectives**

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|  | Objective | Assignment |
|  | Review Objectives:   1. Identify the atomic number, atomic mass, mass number, and number of protons, neutrons, and electrons in each element. |  |
|  | 1. Identify the number of valence electrons in each group. |  |
|  | 1. Know the difference between periods and groups and their location on the periodic table. What does each period on the PT represent in relation to electron configuration? |  |
|  | 1. Be able to draw Bohr models and Lewis dot structures. |  |
|  | 1. Know the locations of the s, p, d, & f block and what they mean. How does the length of the period relate to electron configuration? |  |
|  | 1. Describe how ions form and how to determine the charge on the ion. |  |
|  | New Objectives:   1. Describe Mendeleev and Mosley’s contributions to the periodic table. |  |
|  | 1. Describe what periodic law is and how it affected the development of the periodic table. |  |
|  | 1. How is the periodic table currently arranged? How was the periodic table previously arranged? |  |
|  | 1. Describe the properties of alkali metals, alkali earth metals, halogens, and noble gases. |  |
|  | 1. Identify which elements are metals, nonmetals, and metalloids. Describe the properties of metals, nonmetals, and metalloids. |  |
|  | 1. Know the reactivity, oxidation number, if a metal, nonmetal, or metalloid, and properties of each group. |  |
|  | 1. Describe the following trends on the periodic table:    1. Number of protons    2. Atomic mass    3. Number of principle energy levels    4. Metals, nonmetals, and metalloids |  |
|  | 1. Define:    1. atomic radius    2. ionic radius    3. ionization energy    4. electronegativity.    5. electron affinity |  |
|  | 1. Describe how and why an atoms becomes a cation or anion. |  |
|  | 1. Describe the following trends on the periodic table: (know the trends going across the period and down the group as well as the overall trend.)    1. atomic radius    2. ionic radius    3. ionization energy    4. electronegativity    5. electron affinity |  |
|  | 1. Describe WHY the above trends occur. |  |
|  | 1. Describe why the values for first, second, and third ionization energy are different. |  |

Periodic Table Trends Vocabulary

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| Word | Definition | Sentence or Picture |
| 1. Actinide |  |  |
| 1. Anion |  |  |
| 1. Atomic radius |  |  |
| 1. Cation |  |  |
| 1. Electron Affinity |  |  |
| 1. Electronegativity |  |  |
| 1. Halogens |  |  |
| 1. Ion |  |  |
| 1. Ionization |  |  |
| 1. Ionizing energy |  |  |
| 1. Lanthanide |  |  |
| 1. Main group elements |  |  |
| 1. Periodic law |  |  |
| 1. Representative elements |  |  |
| 1. Transition metal |  |  |
| 1. Valence electrons |  |  |