Unit 3 – Atomic Theory and the Periodic Table



Georgia Performance Standards

 SC3: Students will use the modern atomic theory to explain the characteristics of atoms.

1. Discriminate between the relative size, charge, and position of protons, neutrons, and electrons in the atom.
2. Use the orbital configuration of neutral atoms to explain its effect on the atom’s chemical properties.
3. Explain the relationship of the proton number to the element’s identity.
4. Explain the relationship of isotopes to the relative abundance of atoms of a particular element.
5. Relate light emission and the movement of electrons to element identification.

SC4: Students will use the organization of the Periodic Table to predict properties of elements.

1. Use the Periodic Table to predict periodic trends including atomic radii, ionic radii, ionization energy, and electronegativity of various elements.
2. Compare and contrast trends in the chemical and physical properties of elements and their placement on the Periodic Table

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|  | **Assignments** |  |  | **Assignments** |
| **1** | **CW 1 - Atomic Structure** |  | **5** | **Project - Atomic Theory** |
| **2** | **CW 2 - Electron Configurations** |  | **6** | **Lab: Flame Tests** |
| **3** | **CW 3 - Electrons and Light** |  | **7** | **HW 1 - Atomic Structure & Electrons** |
| **4** | **CW 4 - Periodic Table & Trends** |  | **8** | **HW 2 - Periodic Table & Trends** |