Course Name: CHEMISTRY I (semester course)

**Final Review Sheet**

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| **ELO** |
| **Unit 1. Safety** Student will recognize safe lab behavior and know the location of safety materials in the science lab and classroom. |
| **Unit 2. Introduction to Chemistry (Matter) (Chapter 1)**  Student will describe and classify the properties of matter.  **\***element vs. compound  \*symbols and formulas  \*density formula  \*physical vs. chemical properties |
| **Unit 3. The Atom** **(Chapters 2 and 7)**  Student will distinguish among atomic particles and their properties.  \*the atom  \*counting protons, neutrons, electrons  \*Bohr, Rutherford, Thomson |
| **Unit 4. The Periodic Table** **(Chapters 3 and 8)**  Student will justify elemental properties based on periodic trends.  \*valence electrons  \*determination of reactivity based on valence electrons  \*periodic properties of metals, metalloids, nonmetals |
| **Unit 5. Compounds (Chapters 4 and 5)**  Student will differentiate chemical bonds and their properties.  \*ionic compound properties and naming rules  \*covalent compound properties and naming rules |
| **Unit 6. Reactions (Chapter 6)**  Student will justify the Law of Conservation of Mass.  \*5 signs of a chemical change  \*5 types of reactions  \*balancing equations due to the Law of Conservation of Matter (mass) |
| **Unit 7. Kinetic Theory** **(Chapters 10 and 11)**  Student will explain changes in matter based on the Kinetic Theory.  \*absolute zero  \*particle attraction and kinetic energy of solids, liquids, and gases  \*resulting macroscopic properties based on above  \*Gas Laws: Relationships between pressure, volume, and temperature |
| **Unit 8. Solutions, Acids, and Bases** **(Chapters 13 and 14)**  Student will compare and contrast the properties of mixtures.  \*Water has unique properties based on its structure  \*Solubility  \*Properties of acids and bases |