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 |