**Chemistry: Exploring Matter**

Students will investigate, and demonstrate understanding of properties of common elements and simple compounds, and of the trends in the periodic table. They will assess social, environmental and economic impacts of the use of common elements and simple compounds, and investigate their physical and chemical properties.

**Major Concepts**

**Safety in the Lab**

1. **Hazardous Household and WHMIS symbols**
2. **Lab Equipment**

**Properties of Matter**

1. **differences between: physical and chemical properties**
2. **differences between: physical and chemical changes**
3. **Classification of Matter: pure substances and mixtures, element and compound, atoms and molecules.**
4. **Particle theory of matter.**

**Periodic Properties.**

1. **1 Lay out of the Periodic Table: Metals vs Non-metals**
2. **Five major groups of elements (Noble, Alkali, Halogens, Hydrogen, Metalloids) and their respective properties.**

**Atomic Structure**

1. **Three parts of an atom (proton, neutron and electron) and their respective mass and charge**
2. **Standard atomic notation**
3. **Determine the number of subatomic particles in an atom.**
4. **Bohr-Rutherford diagrams**
5. **Counting atoms**
6. **Bonding – building molecules**