SCH 3U
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Unit 1 Review: Structure and Properties of Matter

Concepts:

- Atomic Theory
  - Contributions of Dalton, Thomson, Rutherford, Chadwick, Bohr
  - Describe Rutherford's goldfoil experiment.
- Isotopes
  - What is an isotope? How would you identify one.
  - What is the unit for an isotope?
  - Be able to calculate average atomic mass of an element.
- Periodic Table and Trends
  - What are the major groups in the periodic table?
  - Who is the modern father of the periodic table?
  - Compare and contrast groups and periods.
  - Describe the atomic trend for: atomic radius, electronegativity, electron affinity, ionization energy.
  - Be able to describe each of the above terms.
  - What is larger, first ionization energy or second ionization energy
- Lewis Structures
  - Be able to draw a Lewis structure for various molecules.
- Molecular Forces
  - List and describe the two types of intramolecular forces
  - List and describe the three types of intermolecular forces. Which is strongest? Weakest?
  - How may you identify a covalent, polar covalent, and ionic bond?
- Naming and Balancing
  - Name ionic and molecular compounds
  - Name polyatomic compounds
  - Name acids and bases
  - Balance chemical equations

Be able to:

- Fill out electron diagram and full electron configurations of an atom when provided with a diagram.
- Calculate average atomic mass
- Draw Lewis diagrams for a given molecule, identify if it's polar
- Name various compounds
- Balance Chemical Equations

Practice Questions:

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