SCH3U1 UNIT 1 Matter Overview

1. Development of the Atomic Model
    a. identify key observations and experiments in development of atomic model (up to B-R model)
    b. Identify scientists involved in key developments in atomic theory
    c. explain significance of observations
    d. define and interpret mass number, atomic number, number of subatomic particles present, including for ions
    e. explain relationship between atomic number and mass number
    f. define or explain the importance of atomic mass, isotopes and isotopic abundance
    g. solve relative atomic mass problems
2. Periodic Trends and B-R model
    a. Explain key features of the Bohr- Rutherford model
    b. Draw and interpret Bohr-Rutherford atoms/ions
    c. Know properties and structure of the periodic table, families, periods, blocks (page 19)
    d. Explain experimental evidence that led to Bohr Model
    e. identify trends in AR, IE, EA and through data analysis
    f. explain periodic law and trends based upon the B-R model
    g. Explain how investigations related to periodic trends
    h. Identify limitations of B-R model of atom
    ~~i. conduct successive ionization energy calculations and explain what it means~~
3. Quantum Atomic Model

Below is presented in Class as a Preview of Grade 12 (and because Quantum is cool 🙂) but is NOT assessed in the course

~~a. identify key features of quantum model~~
~~b. write electronic configurations (both long and short-hand notation)~~
~~c. draw and interpret orbital (energy) diagrams~~
~~d. explain anomalies with periodic trends using the quantum atom~~
~~e. identify and explain full and partial stability~~
~~f. identify anomalies in periodic trends~~
~~g. explain anomalies in trends based on partial and full stability~~