**Unit 3 Test Review: The Atom and The Periodic Table**

**The Atom:**

* What did each of the following people discover regarding the atom and what process did they use to discover it:
  + J.J. Thompson (what “instrument” did he use)
  + Rutherford
  + Bohr
  + Dalton
* Know the location and how to determine the quantity of each of the following:
  + Protons
  + Electrons
  + Neutrons
* What are isotopes?
* How do you determine if you have an isotope?
* How is the atomic mass (amu – atomic mass units) calculated on the periodic table?
* How do you determine how many valence electrons an atom has?
* What subatomic particle changes to produce an ion?
* How do you determine the number of electrons you have with an ion?

**The Periodic Table:**

* What did each of the following people discover regarding the periodic table and what process did they use to discover it:
  + Moseley
  + Mendeleev
* Know how to calculate frequency, wavelength, and energy
* Know the relationship between frequency and wavelength
* Know the location and properties of each of the following groups:
  + Alkali Metals
  + Alkaline Earth Metals
  + Halogens
  + Noble Gasses
  + Transition Metals
* Know why the elements are grouped the way they are
* Know commonalities and trends of the periodic table