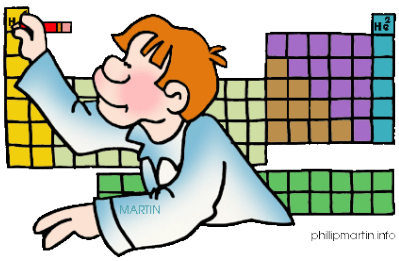
Name _____



What can the periodic table tell chemists about the atom?

Owning my learning: The learning intentions or goals for the unit are listed below. Completing this table can help you determine what you know and the level to which you know it. Place a check mark in the box that best describes your learning level at the beginning of the learning and after we have learned together. The columns are numbered 1 to 4 to indicate the following levels of proficiency:

1	Emerging	"I'm just getting started."	2	Developing	"I get some of it."
3	Accomplished	"I get it."	4	Extending	"I can teach a friend."

Be honest with yourself as you complete the checklist to filter what you know from what you don't know and remember to study efficiently and effectively, study what you don't know.

I Can Describe:

1	2	3	4	
○	○	○	○	Chemist's understanding of the atom from the work of Dalton, Thomson, Rutherford, and Bohr
○	○	○	○	The location, mass and charge of the proton, neutron and electron
○	○	○	○	Trends in the periodic table such as electronegativity, ionization energy, electron affinity, atomic radii, and ionic radii
○	○	○	○	An isotope for an element in term of its number of protons, neutrons and electrons
○	○	○	○	The Aufbau Principle, Hund's Rule and the Pauli Exclusion Principle as it applies to electron configurations
○	○	○	○	The shielding effect
○	○	○	○	The nature of ionic and covalent bonds
○	○	○	○	Isomers of organic compounds

I Can Determine:

1	2	3	4	
○	○	○	○	The average mass of an element when given the % of each isotope
○	○	○	○	The % composition of isotopes for an element given the atomic mass and the isotopes
○	○	○	○	Both ground state and abbreviated (noble gas) electron configurations
○	○	○	○	Electron configurations for multivalent metals

I Can Create:

1	2	3	4	
○	○	○	○	A biocard outlining the contribution of a scientist to the field of chemistry

I Can Identify:

1	2	3	4	
○	○	○	○	Exceptions to the rules for stable electron configurations (Cu, Cr) for atoms

I Can Use:

1	2	3	4	
○	○	○	○	The periodic table to determine the number of protons, neutrons and electron in an atom or ion
○	○	○	○	The words energy level, quantum, orbital, shell, and subshell correctly
○	○	○	○	Determine the electron configuration of an **atom** and document it correctly from the element's location on the periodic table
○	○	○	○	Determine the electron configuration of an **ion** and document it correctly from the element's location on the periodic table
○	○	○	○	A chemistry model set to construct models of organic compounds

I Can Distinguish Between:

1	2	3	4	
○	○	○	○	Mass number and atomic mass
○	○	○	○	An atom, ion and isotope

I Can Predict:

1	2	3	4	
○	○	○	○	The number of valence electrons for an element from its electron configuration

Chemistry 11 – Mrs. Greig