

Unit 3: Electrons and the Periodic Table

Learning Targets

1. Write electron configurations for any element in the first 4 rows of the periodic table.
 - I can describe the differences between an energy level, sublevel, and orbital.
 - I can determine how many electrons are in a given orbital or sublevel or energy level.
 - I can use arrows to write complete orbital diagrams of any element in the first 4 rows of the periodic table.
2. Predict general trends of atomic radius in the periodic table.
 - I can explain the general group and period trends for atomic radius.
 - I can explain why trends in size exist based on the structure of the atoms.
 - I can use trends to arrange elements in order of increasing or decreasing atomic radius.
3. Predict general trends of first ionization energy in the periodic table.
 - I can define ionization energy.
 - I can identify group and period general trends for ionization energy.
 - I can explain why trends in size exist based on the structure of the atoms.
 - I can use trends to arrange elements in order of increasing or decreasing ionization energy.
4. Predict charges of the ions of main group elements using their electron structure and their locations on the periodic table.
 - I can describe how ions are formed
 - I can predict ionic charges for representative elements based on valence electrons
 - I can predict ionic charges for representative elements based on their location on the periodic table