



World Vision Academy

AP Chemistry Course

The Big Ideas and Course Outline:

- Big Idea 1: The chemical elements are fundamental building materials of matter, and all matter can be understood in terms of arrangements of atoms. These atoms retain their identity in chemical reactions.
- Big Idea 2: Chemical and physical properties of materials can be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them.
- Big Idea 3: Changes in matter involve the rearrangement and/or reorganization of atoms and/or the transfer of electrons.
- Big Idea 4: Rates of chemical reactions are determined by details of the molecular collisions.
- Big Idea 5: The laws of thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter.
- Big Idea 6: Any bond or intermolecular attraction that can be formed can be broken. These two processes are in a dynamic competition, sensitive to initial conditions and external perturbations.