



Guaranteed and Viable Curriculum (GVC) for: Chemistry

1st Quarter:

GVC #1: Students will be able to correctly identify the charge, mass, and location of protons, neutrons, and electrons. Students will be able to build a model of the atom with all particles in the correct location. Chemistry Core Standard 1.1

GVC #2: Students will use the periodic table to predict patterns and trends. Students will be able to identify the electrons and how they predict reactivity, properties, bonding type or ion formation. Students will construct models to explain and represent molecular structure. Chemistry Core Standard 1.5 and 2.1 and 3.2

2nd Quarter:

GVC #3: Students will be able to identify patterns in isotopes and understand the process of radioactive decay. They will understand the difference between isotopes of the same element and how they decay by different modes and rates. Students will be able to relate the age of materials through the process of radioactive decay. Students will demonstrate the building up of the elements in the universe starting with hydrogen to form heavier elements. Chemistry Core Standard 1.2 and 1.3 and 1.4 and 1.5 and 4.2 and 4.4 and 4.5

3rd Quarter:

GVC #4: Students will construct models to explain and represent molecular structure. Use these models to predict and describe types of bonds and attractive forces. Chemistry Core Standard 2.2 and 2.3

GVC #5: Students will learn that when bonds are formed between atoms, energy is released. Energy must be provided when bonds are broken. Students will learn about the electromagnetic spectrum and how shorter wavelengths can cause damage to living cells. Chemistry Core Standard 4.1 and 4.2

4th Quarter:

GVC #6: Students will analyze the distribution and proportion of particles in solutions and model the impact of concentration on solution properties. Understand the changes that occur in a chemical reaction happen at a molecular level. Students will be able to give examples of observable properties that indicate that changes occurred. Chemistry Core Standard 3.1 and 3.3 and 3.6

GVC #7: Students will use mathematics to support the observation that matter is conserved during chemical reactions and matter cycles. Students will identify whether a simple chemical reaction absorbs or releases energy and how it is related to the formation or breaking of bonds. Chemistry Core Standard 3.4 and 3.7 and 4.1