By the end of this unit you will be able to:

**States of Matter**

* Describe and explain matter
* Explain Kinetic Molecular Theory
* Use KMT to explain how particles move in different states of matter.
* Observe and describe physical and chemical properties of matter
* Observe and describe physical and chemical changes of matter
* Measure and determining various properties of matter (mass, volume, density)
* Observe, measure and record with accuracy and precision
* Use scientific understandings to identify relationships and draw conclusions
* Law of conservation of mass

**Atomic Theory**

* Explain composition of atoms (quarks, leptons, protons, neutrons, and electrons)
* Describe how models of atoms have changed over the centuries
* Use atomic theory to explain composition of atoms
* Use atomic theory to explain the arrangement of and forces that bind protons, neutrons, and electrons in an atom,
* protons and neutrons (made of quarks) are held together in the nucleus by a strong nuclear force
* electrons (a type of lepton) are held at a distance from the nucleus through electromagnetism