**UNIT OUTCOMES**

Science Inquiry and Application

* Students will identify questions and concepts that guide science investigations (Application)
* Students will design and conduct scientific investigations (Evaluation, Analysis)
* Students will use technology and mathematics to improve investigations and communications (Synthesis, Evaluation)
* Students will formulate and revise explanations and models using logic and evidence (Analysis, Synthesis, Evaluation)
* Students will recognize and analyze explanations and models (Analysis, Synthesis)
* Students will communicate and support a scientific argument (Application, Evaluation)

Study of Matter

* Students will be able to classify matter, understand the changes in the different states of matter and identify the difference between heterogeneous and homogeneous mixtures. (knowledge, comprehension)
* Students will be able to identify and demonstrate knowledge of parts of the atom, ions, and isotopes(Knowledge, Comprehension)
* Students will develop basic understanding of periodic table of elements (structure, information, use) (Knowledge, Comprehension, Application)
* Students will understand bonding and compounds including types of bonds and nomenclature (Comprehension)
* Students will explain chemical and nuclear reactions (Knowledge, Application)

Energy and Waves

* Students will quantify kinetic energy, gravitational potential energy and demonstrate an understanding of transformation of energy. (Comprehension, Application)
* Students will demonstrate an understanding of thermal energy and its effect on our planet (Knowledge, Analysis, Application)
* Students will define electricity and illustrate their knowledge of a current, electric potential and the transfer of energy (Knowledge, Comprehension, Application)
* Students will recognize waves and key concepts associated with waves including (Knowledge, Application, Comprehension, Synthesis)
	+ Refraction, reflection, diffraction, absorption, superposition
	+ Radiant energy and the electromagnetic spectrum
	+ Doppler shift

Forces and Motion

* Students will be able to define speed, velocity, acceleration. (Knowledge)
* Students will solve distance, velocity, speed, and time story problems. (Knowledge, Comprehension, Application)
* Students will be able to create and interpret speed, velocity, and time graphs (Knowledge, Comprehension, Application)
* Students will identify Newton’s laws and give an example of each law in nature (Knowledge, Comprehension, Application, Analysis)
* Students will name types of forces and interpret force diagrams (Knowledge, Comprehension, Application, Analysis)

The Universe

* Students will demonstrate an understanding of the history and development of the universe (Knowledge, Comprehension, Application, Evaluation, Application)
* Students will identify basic understanding of theories of how galaxies form (Knowledge, Comprehension, Application)
* Students will recognize basic formation of Stars and the stages of evolution involved (Knowledge, Comprehension, Application)