

INQUIRY**Scientific Inquiry**

_____ Conduct systematic controlled experiments to test the hypothesis.

Technological Design

_____ Build and test different models or simulations of the design solution using suitable materials, tools, and technology.

CONTENT**Physical Science****Measurement**

_____ Make measurements; construct and interpret graphs of data, and apply basic problem solving solutions.

Kinematics

_____ Compare and contrast distance, speed, velocity, and acceleration of moving objects.

Statics-Linear and Rotational

_____ Summarize Newton's laws distinguishing mass and weight.

Dynamics-Linear and Rotational

_____ Define momentum and angular momentum and apply their laws of conservation.

Mechanical Energy

_____ Compare and contrast kinetic and potential energies and recognize situations where mechanical energy is conserved

Gravitation

_____ Interpret Newton's law of universal as an inverse square law and relate to examples.

Properties of Matter

_____ Explain the methods of heat transfer and relate to environmental and energy conservation issues.

Waves and Modern Physics

_____ Illustrate reflection, refraction, diffraction, and interference of waves as they relate to sound and light.

Geometrical Optics

_____ Use ray tracing techniques to locate the images with mirrors and lenses.

Electricity and Magnetism

_____ Relate work, force, and energy to electric and magnetic fields.

CONNECTIONS**Science Practices**

_____ Demonstrate correct lab procedures and evaluate the potential sources of error and the validity of scientific claims.

S/T/S (Science, Technology and Society)

_____ Assess how scientific and technological progress has affected other fields of study, careers, job opportunities, and aspects of everyday life.