



Physics is the study of matter and energy and their interactions. This study will encompass fundamental concepts in the laws of motion, forces, energy and momentum, thermodynamics, waves, and nuclear phenomena. Student investigations emphasize accurate observations, collection of data, data analysis, and safe manipulation of laboratory apparatus. Students will acquire factual knowledge within a conceptual framework, practice experimental design and interpretation, work collaboratively with classmates, and develop critical thinking skills. Texas Essential Knowledge and Skills for Physics [§112.39. Physics, Adopted 2017](#)

1-Dimensional Motion
 Laws governing motion
 Generate and interpret graphs
 Motion in 1-dimension equations and graphical vector addition

Work, Energy, and Power
 Laws of Conservation of Energy in one dimension
 Law of Conservation of Momentum in one dimension
 Momentum and Impulse
 Thermodynamics

2-Dimensional Motion
 2-Dimension motion equations and graphical vector addition
 Projectile and circular motion
 Motion Laws
 Force and Free Body Diagrams

Laws of Thermodynamics
 Thermal energy transfer
 Characteristics and behaviors of waves
 Vibrations and waves
 Sound

Electric Force
 Conductors and insulators
 Circuits
 Electromagnetism

Atomic, nuclear, and quantum phenomena
 Photoelectric effect
 Mass-energy equivalence
 Modern Physics

Please contact your course science teacher.