Physics
Alignment with Alaska State Standards

Two-Semester Course
Prerequisite: "C" average in Algebra 2 or consent of instructor

A study of the relation between matter and energy. Detailed descriptions are supported by extensive use of scientific models and relative based concepts. The student will explore and apply classical Newtonian Mechanics as well as heat, light, wave theory, sound energy, electricity and magnetism, and elementary nuclear physics. Labs are required.

Grade level expectations might not be met until student takes the course.

SA1.1 - GLE 11
Labs conducted to explore all expectations

SA1.2 - GLE 11
Students use multiple mathematical methods for problem solving and are introduced to several concepts, which allow students to investigate various applications.

SB2.1 - GLE 10 &11
Students Examine problem solving using Thermal energy equations and concepts.

SB3.2 - GLE 11
Einstein's energy and relativity-based equations are analyzed and used to show inherent energy potential and release.

SB4.2 - GLE 10 & 11
Newton's second and third laws are investigated through problem solving and concepts.

SB4.2 - GLE 10 & 11
Students build a small electric motor and simple circuits that will cover the expectations. Resistance and inductance equations are included.

SE1.1 - GLE 11
Students are given the opportunity to investigate how Physics applies to engineering fields and how those fields are influenced by social, economic and political scenarios at any given time.

SE2.1 - GLE 11
Each student will use multiple methods for problem solving depending on their math abilities and understanding of concepts.

SG2.1 GLE 11
Students read a book that includes Hawking's and Einstein's work and theories. They makes reports and conduct discussions.