

EARTH SCIENCE
Alignment with Standards and GLE's
(Grades 10th-11th-12th)

Two-Semester Course

Prerequisite: Successful completion of both semesters of Biophysical Science and completed or concurrently taking Algebra I.

This course covers topics in several Earth Science related areas. These include but are not exclusive of rocks and minerals, physical geology, volcanoes, earthquakes, plate tectonics, glaciology, weather, and astronomy. The rocks and minerals section utilized extensive hands on testing, identification and classification. Various individual projects and labs challenge the student's knowledge and discovery of Earth Science topics.

SD1.1 GLE 10 & 11 The Rock cycle is covered in detail

SD1.2 GLE 10 & 11 Students cover the hydrologic cycle, carbon cycle, nitrogen cycle and the oxygen cycle

SD2.1 GLE 10 & 11 Students explore the effects of weathering and erosion with respect to geomorphology. Environmental geology concerns are covered

SD 2.2 GLE 10 & 11 Students receive in-depth lessons and perform projects with a plate tectonics unit. It is presented as one of the most important scientific discoveries of all time

SD3.1 GLE 10 & 11 Students are exposed to current theories concerning ozone depletion, global warming and general air pollution. Plausible and factual causes of man induced climate alteration are discussed

SD3.1 GLE 11 Students explore the phenomena of Solar wind and its effects on auroras and the Earth's Magnetosphere. The coriolis effect is studied with current theories and known facts

SD 4.1 GLE 10 & 11 Students are exposed to a comprehensive astronomy unit. This unit covers many aspects of celestial bodies throughout the universe

SD 4.2 GLE 10 & 11 The evolving Universe is a common topic in the astronomy unit. Celestial motion and Cosmological principles are covered

SD 4.4 GLE 10 & 11 The Big bang theory is covered under the Cosmological exploration unit

SF1.1 - SF3.1 GLE 11 Students explore the historical record of looking at the night sky. Cultural aspects and mythology topics are discussed. Students are lead to appreciate the significance of astronomical observations over time

SG3.1 GLE 11 Discussions include historical perspectives of theories and observations by scientists that were not generally in tune with prevailing ideas of specific periods in time