

Course Description

SCIENCE: Earth Science CR

COURSE DESCRIPTION: This introductory Earth Science course incorporates the body of knowledge and facts accumulated from people's observations of the Earth around them and the skies above them. This observed information of the earth has evolved over centuries into the branch of science known as earth science. Earth science has several different branches of study: the solid earth (geology); the earth's waters (hydrology and oceanography); the earth's atmosphere (meteorology); and the universe beyond earth (astronomy). Using careful observation and experimentation, students will learn to effectively analyze and evaluate the earth's natural phenomena and their causes, as well as, its relationship in the universe by focusing on the four major areas of study.

This course has been specifically built with the credit recovery student in mind. The course content has been appropriately chunked into smaller topics to increase retention and expand opportunities for assessment. With each topic, diagnostic quizzes are presented to the student, allowing students to pass through areas of content that they have previously studied successfully. Post-topic quizzes are presented with each topic of content. Audio readings are included with every portion of content, allowing auditory learners the opportunity to engage with the course. Test pools and randomized test questions are utilized in pre- and post-topic quizzes as well as unit exams, ensuring that students taking the course will not be presented with the same exams.

The ELL version of the course includes additional practice activities (such as cloze activities), as well as pre-topic vocabulary lists, that introduce key vocabulary in English and in Spanish.

PREREQUISITES: None

COURSE LENGTH: Two Semesters or Block

REQUIRED TEXT: None

COURSE OUTLINE:

Semester I

GEOLOGY

Overview of Planet Earth In Terms of Earth Science

Section 1

- What is earth science?
- Explore the branches of earth science
- Understand the importance of earth science

Section 2-Earth as a series of interrelated systems

Section 3-Think like an earth scientist (scientific method)

Minerals, Rocks and the Rock Cycle

Section 1-Minerals and Basic Atomic Structure

Section 2-Rock-Forming Minerals

Section 3-Physical Properties of Minerals

Section 4-Igneous, Sedimentary, and Metamorphic Rocks

Section 5-Rock Cycle and Earth's Systems

Plate tectonics, Deformation of Earth's Crust, Earthquakes, and Volcanoes

Section 1-Plate Tectonics

Section 2-Folds, Faults, and Rock Deformation

Section 3-Earthquakes

Section 4-Volcanoes

Weathering, Erosion, and Deposition; Glaciers and Deserts

Section 1-Weathering

Section 2-Erosion

Section 3-Deposition

Section 4-Glaciers

Section 5-Deserts

Geologic Time, Relative Age Dating, and Isotopic Dating

Section 1-Geologic Time

Section 2-Relative Age Dating

Section 3-Isotopic Dating

Semester II

HYDROLOGY & OCEANOGRAPHY

Hydrology

Section 1-Rivers, Streams, and Floods

Section 2-Groundwater

Oceanography

Section 1-Ocean Basins

Section 2-Waves, Currents, and Tides

Section 3-Coastal Processes

METEOROLOGY

The Atmosphere, Weather, and Climate

Section 1-The Atmosphere

Section 2-Weather Factors and Patterns

Section 3-Climate Factors and Zones

Section 4-Climate Change

ASTRONOMY

The Earth, Moon, Sun, Solar System, Stars, Galaxies, and the Universe

Section 1-The Earth, Moon, and Sun

Section 2-The Solar System

Section 3-Stars, Galaxies, and the Universe