Earth Systems
1st Semester

CONTENT	DATE

INTRODUCTION TO EARTH SYSTEMS/ LAB SAFETY — August 6 - 7

ORGIN OF THE EARTH — August 10-September 4

- Course Overview
- Introduction to Earth Science
- Competing Perspectives
- A Sequence Of Events
- Planetary Motion
- Ability To Orbit
- Project: Newton's Law
- A Unique Planet
- Project: Earth Comparisons
- The Earth's Place in the Solar System
- Project: Scale of the Solar System
- The Earth's Orbit and Seasons
- Special Project

DYNAMIC STRUCTURE OF EARTH — September 7-October 2

- Layers of the Earth
- Project: Building a Model of the Earth
- Continental Drift
- Plate Tectonics
- Project: Mantle Convection
- Plate Boundaries
- Project: Plate Boundaries
- The Spheres of Earth
- Project: Sphere Interaction Lab
- Geochemical Cycles: Cycles of Earth Materials
- Project: The Story of the Spheres
- Special Project

FORCES AND FEATURES OF EARTH — October 5-November 6

- Force of Earthquakes
- Measuring The Force of Earthquakes
- Features of Earthquakes
- Project: Earthquake Features Lab
- Force of Volcanoes
- Impact of Volcanoes
- Prediction of Volcanoes
- Features of Volcanoes
- Project: Volcanic Features Lab
- Using Geologic Maps
- Using Topographic Maps
- Project: Mapping
- Project: Create a Topographic Map
- Special Project

Earth Systems
1st Semester (Cont.)

CONTENT	DATE

FEATURES OF EARTH'S CRUST — November 9-December 11

- Minerals
- Project: Crystal Systems
- Mineral Identification
- Project: Identifying a Mineral
- Igneous Rocks
- Sedimentary Rocks
- Metamorphic Rocks
- The Rock Cycle
- Project: Identifying a Rock
- Renewable Resources
- Nonrenewable Resources
- Project: Nuclear Energy
- Special Project

REVIEW AND EXAMS — December 14 - 18

Earth Systems
2nd Semester

CONTENT	DATE

HISTORY OF THE EARTH — January 4 – 22

- Determining Earth's Age
- Relative Dating
- Project: Relative Dating
- Absolute Dating
- Geologic Time
- Project: The Clock of Eons
- Mass Extinctions
- Project: Before, During, and After a Mass Extinction
- Paleoclimatic Changes
- Special Project

SHAPING EARTH'S CRUST — January 25-February 19

- Weathering
- Erosion
- Soil Formation
- Project: Soil Particles
- Rivers and Waves
- Gravity and Glaciers
- Project: Ice Erosion
- Wind
- Destructive Forces
- Constructive Forces
- Special Project

EARTH'S ATMOSPHERE — February 22-March 12

- Evolution of the Atmosphere
- Project: Evolution of the Atmosphere
- Structure of the Atmosphere
- Project: Layers of the Atmosphere
- Atmospheric Cycles
- Solar Interaction
- Project: Solar Energy
- Alternate Project: Temperature
- Air Pressure and Winds
- Project: Air Circulation
- Alternate Project: Barometers
- Air Pollution
- Project: Greenhouse Effect
- Special Project

Earth Systems
2nd Semester (Cont.)

CONTENT	DATE

EARTH'S WEATHER AND CLIMATE — March 15-April 16

- Weather and Climate
- Project: Weather or Climate?
- Clouds and Precipitation
- Project: Clouds and Weather
- Project: Clouds and Rain
- Air Masses and Fronts
- Solar Power
- Project: Control the Weather
- Geographical Effects
- Climate Regulation and Change
- Project: Research Your Climate
- Weird Weather
- Measuring Weather
- Project: Predict the Weather
- Special Project

EARTH'S WATER — April 19-May 14

- The Water Cycle
- Project: Water Purification
- Water Basics
- Water Distribution
- Project: Water Conservation
- Groundwater
- Experiment: Porosity and Permeability
- Lakes and Rivers
- Glaciers and Ice Caps
- Ocean Water
- Experiment: Fresh Water vs. Saltwater
- Waves and Tides
- Currents
- Special Project

REVIEW — May 17 - 21

FINAL EXAMS — May 24 - 26