

Prerequisite courses: none

Grade level: 9-12

Course Description

In this course, students explore our planet's systems, history, and processes. Students will study the Earth's composition, including its layers and the interactions between the atmosphere, hydrosphere, geosphere, and biosphere. They will explore ecosystems, environmental changes, and the forces that shape Earth's surface, such as plate tectonics and earthquakes. The course also covers Earth's water systems, weather, and climate, including the factors that affect climate change and forecasting. Through an investigation of fossils, dating techniques, and the geologic time scale, students will uncover Earth's history and evolution over billions of years.

This course is part of the Exceptional Students Course Suite, designed for high school students working three or more grade levels behind. The Exceptional Students courses are ideal for students whose IEPs allow them to earn credit for below-grade-level coursework.

Course Objectives

Students will meet the following goals in this course.

- Explain the layers of Earth and how its four major systems—atmosphere, hydrosphere, geosphere, and biosphere—interact to shape the planet.
- Explore ecosystems by identifying the roles of biotic and abiotic factors and predicting how environmental changes affect organisms and habitats.
- Describe the processes of plate tectonics, seafloor spreading, and earthquakes, and relate them to the formation of landforms and changes to Earth's crust.
- Investigate Earth's water systems, including freshwater sources, ocean circulation, and the importance of managing water resources responsibly.
- Analyze weather patterns, interpret climate data, and explore how human and natural factors influence short-term and long-term climate change.
- Study fossils, rock layers, and dating methods to construct a timeline of Earth's history and understand the evolution of its features over geologic time.

Student Expectations

This course requires the same level of commitment from students as a traditional classroom course. Students are expected to spend approximately 5–7 hours per week online on:

- interactive lessons, which include a mixture of instructional videos and tasks.
- assignments, in which they apply and extend learning in each lesson.
- assessments, including quizzes, tests, and cumulative exams.

Earth Science Essentials I

Communication

Teachers will communicate with students regularly through discussions, emails, chats, and system announcements. Students will also communicate with classmates, either via online tools or face to face, to collaborate, ask and answer questions in peer groups, and develop speaking and listening skills.

Grading Policy

Students will be graded on work completed online and work submitted electronically to the teacher. The weighting for each category of graded activity is listed below.

Grading Category	Weight
Assignments	20%
Lesson quizzes	30%
Unit tests	30%
Cumulative exams	20%

Scope and Sequence

When students log on to Imagine Edgenuity, they can view the entire course map—an interactive scope and sequence of all topics under study. The units of study are listed below

Course Units
Unit 1: The Earth's Composition
Unit 2: Plate Tectonics
Unit 3: Earth's Waters
Unit 4: Weather and Climate
Unit 5: Earth's History