



Earth Science

The following learning targets represent the major concepts studied and assessed in this course.

Semester 1:

Unit 1: Astronomy

- Explain the relationship between a star's properties and the released energy.
- Explain how stars produce different elements over their lifetimes.
- Use astronomical evidence to support the big bang theory.
- Use mathematical representations to predict orbital motions of objects in the solar system.

Unit 2: Geologic Time

- Describe using evidence to support that continental rocks are generally older than oceanic rocks.
- Explain how the Earth was formed.
- Construct an argument about the simultaneous coevolution of Earth's systems and life on Earth.

Semester 2:

Unit 3: Plate Tectonics

- Construct a model to illustrate how Earth's interior and exterior processes operate.
- Support a claim that a change in Earth's surface can cause changes to other Earth systems.
- Evaluate evidence for the ages of different materials on Earth based on plate movements.
- Evaluate evidence of plate tectonics to show past and present plate movement.

Unit 4: Rocks and Minerals

- Model the cycling of carbon between the different Earth systems.
- Construct an explanation for how the availability of natural resources have influenced human activity.

Unit 5: Weather and Climate

- Explain how physical processes on Earth's surface have shaped Earth's features over time.
- Describe how carbon cycles between Earth's systems.
- Use data to provide evidence for the current rate of climate change.