Working Together
To support families and teachers in realizing the goals of the Colorado Academic Standards, this guide provides an overview of the learning expectations for high school earth science and offers some possible learning experiences students may engage in during this school year.

Why Standards?
Created by Coloradans for Colorado students, the Colorado Academic Standards provide a grade-by-grade road map to help ensure students are ultimately successful in college, careers, and life. The standards aim to improve what students learn and how they learn in ten content areas, emphasizing critical-thinking, creativity, problem solving, collaboration, and communication as important life skills in the 21st century.

Science for High Schools (9-12)
The science standards at the middle school and high school grades build upon the foundation for students to work as scientists by asking testable questions, collecting and analyzing different types of evidence, and by providing rationale for their interpretations through reasoning and/or argumentation. Mastery of these standards will result in students deepening their understanding of science through an application and development of scientific knowledge to the solution of practical problems. Students will experience all three “strands” of the science standards during their secondary years: physical science, life science, and earth science.

Where can I learn more?
- Contact your school district regarding local decisions related to standards, curriculum, resources, and instruction.
- Colorado Academic Standards Booklets: http://www.cde.state.co.us/standardsandinstruction/GradeLevelBooks.asp
- Joanna Bruno, Science Content Specialist at 303-919-3907, Bruno_j@cde.state.co.us
Science Learning Expectations for High School Earth Science

Describe how Earth’s geologic history and place in space are relevant to our understanding of the processes that have shaped our planet.

Determine and explain how Earth’s land, air, water, and living things interact as a complex system.

Explore how humans are dependent on the diversity of resources provided by the Earth and the Sun.

Throughout High School, you may find students...

- Using a variety of specialized resources to find scientific information to investigate, analyze and interpret data regarding the history of the universe, solar system and Earth.

- Using specific equipment, technology, and resources such as satellite imagery, global positioning systems (GPS), global information systems (GIS), telescopes, video and image libraries, and computers to explore the universe.

- Analyzing and interpreting data in developing, communicating, and justifying an explanation about the theory of plate tectonics and how it can be used to understand geological, physical, and geographical features of Earth.

- Developing, communicating, and justifying an explanation that shows climate is a result of energy transfer among the air, water, land and living things and that it changes.

- Describing the combination of factors that determine a location’s climate.

- Researching the costs and benefits of exploration, development, and consumption of renewable and nonrenewable resources.

- Analyzing data about the effect of resource consumption and development to draw conclusions about sustainable use.

- Analyzing and interpreting the physical and chemical changes that water, air, gravity, and biological activities create; evaluating the negative and positive consequences of physical and chemical changes on the land.

- Explaining specific natural hazards and predicting their potential for local and global impacts on human activity.