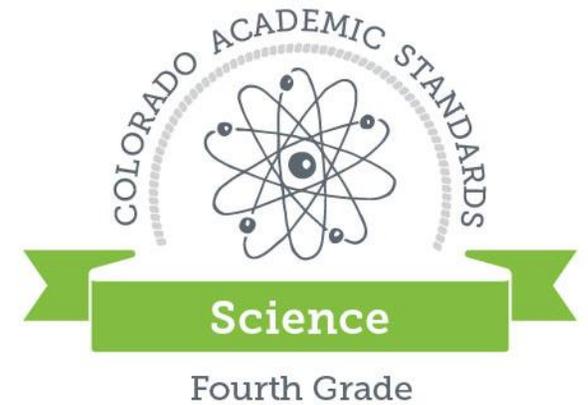


A Guide to the Colorado Academic Standards



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 Fourth Grade Science. This guide offers some learning experiences students may engage in during this school year, experiences that may also be supported at home.

Why Standards?

Created by Coloradans for Colorado students, the Colorado Academic Standards provide a grade-by-grade road map to help ensure students are 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 Elementary Schools (k-5)

The science standards in the elementary grades lay the foundation for students to work as scientists by asking testable questions, collecting and analyzing different types of evidence, and by providing rationales for their interpretations. Mastery of these standards will result in students who have a deep understanding of science and how scientific knowledge can provide solutions to practical problems.

Where can I learn more?

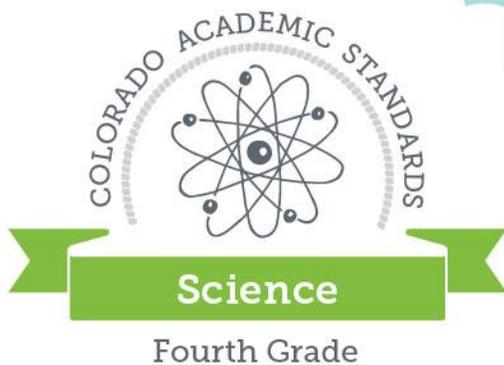
- Contact your school district regarding local decisions related to standards, curriculum, resources, and instruction.
- Colorado Academic Standards Booklets: <http://www.cde.state.co.us/standardsandinstruction/GradeLevelBooks.asp>
- Joanna Bruno, Science Content Specialist at 303-919-3907, Bruno_j@cde.state.co.us



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At the end of
Fourth Grade,
students can...



Science Learning Expectations for Fourth Grade

Physical Science

Recognize that energy comes in many forms such as light, heat, sound, magnetic, chemical, and electrical.

Life Science

Understand all living things share similar characteristics, but also have differences that can be described and classified; compare fossils to each other or to living organisms revealing features of prehistoric environments and providing information about organisms today; identify interaction and interdependence between and among living and nonliving components of systems is essential.

Earth Science

Understand Earth is part of the solar system, which includes the Sun, Moon, and other bodies that orbit the Sun in predictable patterns that lead to observable paths of objects in the sky as seen from Earth.

Throughout the Fourth Grade, you may find students...

- Identifying and describing a variety of energy sources; describing the energy changes that take place in electrical circuits where light, heat, sound, and magnetic effects are produced.
- Using evidence to develop a scientific explanation of what plants and animals need to survive; analyzing and interpreting data about the prehistoric environment.
- Recognize similarities and/or differences among different organisms (species), for identification of fossils, and how organisms adapt to their habitat; comparing and contrasting different types of habitats.
- Using computer simulations of environments; creating and evaluating nonliving components in an ecosystem.
- Gathering, analyzing, and interpreting data about components of the solar system, sunrise and sunset, and moon phases; using evidence to investigate the components of the solar system; developing a scientific explanation for relationships in the solar system.