



Three-dimensional science standards in the elementary grades lay the foundation for students to work and think like scientists and engineers. We also see strong connections to skills students will use to be successful with reading, literacy, and mathematics. In elementary grades, we will explore disciplinary core ideas in physical, life, and Earth and space sciences via phenomena in the world around us. Learners in elementary grades develop and ask testable questions, collect, and analyze different types of evidence, and write and communicate our understanding. Mastery of these standards will result in young learners who have a deep understanding of how scientific knowledge can provide solutions to practical problems we see in our world.

Expectations for 5th Grade Students:

- **Physical Science:** Recognize that matter is made of particles that are too small to be seen; describe how new substances can be formed when chemical reactions occur, explain how Earth's gravitational force exerts force on objects.
- **Life Science:** Understand that plants acquire their material from growth chiefly from air and water, and that matter flows in cycles between air, soil, plants, animals, and microbes as these organisms live and die.
- **Earth and Space Science:** Understand that the Earth and sun provide many renewable and nonrenewable resources; recognize that Earth's surface changes constantly; understand how the uneven heating of Earth's surface (by the sun) affects weather.

Throughout 5th Grade You May Find Students:

- Conducting an investigation to determine whether the mixing of two or more substances results in new substances.
- Developing a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- Developing models to describe the ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- Using data and graphs to describe the amounts and percentages of saltwater and freshwater in various reservoirs to provide evidence about the distribution of water on Earth.
- Obtaining information about ways individual communities use science ideas to protect the Earth's resources and environment.