

Down to Earth

Correlated Standards by Grade

Last Updated: 2026

IMPORTANT: Our classes have a base curriculum that can vary based on instructor, and some activities that match the standards below may not be taught. Please let us know if there is a standard below you would like us to focus on, and we will tailor our classes to make sure we address it!

Next Generation Science Standards (NGSS)

4th Grade

4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

5th Grade

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

5-PS1-3. Make observations and measurements to identify materials based on their properties.

Middle School (6-8)

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Alabama Course of Study (ACOS)

4th Grade

Science

SC.4.12. Plan and carry out investigations to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, and vegetation, investigating a single form of weathering or erosion at a time. *(CCC: Scale, Proportion, and Quantity)*

SC.4.14. Gather information to describe how the use of energy derived from renewable and nonrenewable resources affects the environment. *(CCC: Cause and Effect)*

5th Grade

Science

SC.5.2. Analyze data collected through observations and measurements to identify materials based on their properties, including color, hardness, and reflectivity. *(CCC: Structure and Function)*

SC.5.9. Create and use a model to explain the transfer of matter and energy between the environment and organisms within it. *(CCC: Energy and Matter)*

SC.5.14. Obtain and evaluate information to communicate how science-based solutions are being used to protect Earth's natural resources and its environment. *(CCC: Stability and Change)*

SC.5.15. Design, test, and revise solutions to clear a polluted environment. *(CCC: Stability and Change)*

6th Grade

Science

SC.6.5. Obtain, evaluate, and communicate evidence that explains how constructive and destructive processes shape Earth's surface. *(CCC: Cause and Effect)*

- SC.6.5c. Develop and use models to demonstrate types of weather, effects of agents of erosion and transportation, and the formation of environments of deposition. *(CCC: Cause and Effect)*
- SC.6.5d. Use research-based evidence to propose a scientific explanation of how the distribution of Earth's resources, including minerals, fossil fuels, and groundwater, results from ongoing geoscience processes. *(CCC: Cause and Effect)*

SC.6.11. Obtain, evaluate, and communicate information concerning the relationships between human activities and natural processes and how those relationships affect Earth's systems, including human population growth and its impact on the global environment over time. *(CCC: Cause and Effect)*

- SC.6.11a. Define problems and design solutions to monitor and mitigate human impact on the environment. *(CCC: Cause and Effect)*

7th Grade

Science

SC.7.5. Construct an explanation of how the cycling of matter between abiotic and biotic parts of ecosystems demonstrates the flow of energy and the conservation of matter, including the carbon, nitrogen, and water cycles. *(CCC: Energy and Matter)*

SC.7.7. Analyze and interpret data to explain how density-independent and density-dependent limiting factors in an ecosystem can lead to shifts in populations. *(CCC: Cause and Effect)*

Mississippi College- and Career-Readiness Standards

4th Grade

Science

E.4.9C. Students will demonstrate an understanding of how natural processes and human activities affect the features of Earth's landforms and oceans.

- E.4.9C.1. Analyze and interpret data to describe and predict how natural processes (e.g. weathering, erosion, deposition, earthquakes, tsunamis, hurricanes, or storms) affect Earth's surface.
- E.4.9C.3. Construct scientific arguments from evidence to support claims that human activities, such as conservation efforts or pollution, affect the land, oceans, and atmosphere of Earth.

E.4.10. Students will demonstrate an understanding of the various sources of energy used for human needs along with their effectiveness and possible impacts.

5th Grade

Science

E.5.10. Students will demonstrate an understanding of the effects of human interaction with Earth and how Earth's natural resources can be protected and conserved.

- E.5.10.1. Collect and organize scientific ideas that individuals and communities can use to conserve Earth's natural resources and systems.

6th Grade

Science

L.6.3. Students will demonstrate an understanding of the relationships among survival, environmental changes, and diversity as they relate to the interactions of organisms, populations, and the environment.

- L.6.3.3. Analyze cause and effect relationships to explore how changes in the physical environment (limiting factors, natural disasters) can lead to population changes within an ecosystem.

Social Studies

6.2. Identify geographic patterns in the environment that result from the processes of Earth's physical systems.

- 6.2.3. Explain the major processes and natural phenomena that shape the physical environment and how humans adapt to them.
- 6.2.4. Investigate ways humans change their environment.

6.4. Analyze the concept, usage, and value of natural resources.

- 6.4.1. Characterize and differentiate renewable and non-renewable resources.
- 6.4.2. Identify important resources in the contemporary world and their usage.

6.8. Examine how humans and the physical environment are impacted by the extraction of resources and by natural hazards.

- 6.8.1. Identify and describe ways in which humans modify the physical environment.
- 6.8.2. Explain how people use technology to access resources.

8th Grade

Science

E.8.7. Students will demonstrate an understanding of geological evidence to analyze patterns in Earth's major events, processes, and evolution in history.

- E.8.7.2. Create a model of the processes involved in the rock cycle and relate it to the fossil record.

E.8.10. Students will demonstrate an understanding that a decrease in natural resources is directly related to the increase in human population on Earth and must be conserved.

- E.8.10.2. Create and defend a proposal for reducing the environmental effects humans have on Earth (e.g. population increases, consumer demands, chemical pollution, deforestation, and change in average annual temperature).