

Earth Science

Earth Science Curriculum Overview

The Earth Science curriculum includes the study of the Earth's composition, structure, processes, and history; its atmosphere, fresh water, and oceans; and its environment in space. There is emphasis on historical contributions in the development of scientific thought about the Earth and space. The interpretation of maps, charts, tables, and profiles; the use of technology to collect, analyze, and report data; and the utilization of science skills in systematic investigation is stressed throughout the course. Problem solving and decision making are an integral part of the course curriculum, especially as they relate to the costs and benefits of utilizing the Earth's resources. Major topics of study include plate tectonics, the rock cycle, Earth history, the oceans, the atmosphere, weather and climate, and the solar system and universe.

The Earth Science standards continue to focus on student growth in understanding the nature of science. This scientific view defines the idea that explanations of nature are developed and tested using observation, experimentation, models, evidence, and systematic processes. The nature of science includes the concepts that scientific explanations are based on logical thinking; are subject to rules of evidence; are consistent with observational, inferential, and experimental evidence; are open to rational critique; and are subject to refinement and change with the addition of new scientific evidence. The nature of science includes the concept that science can provide explanations about nature, can predict potential consequences of actions, but cannot be used to answer all questions.

Adopted Instructional Resources

The textbook generally used in both the honors and advanced levels of Earth Science is *Earth Science: Geology, the Environment, and the Universe* published by Glencoe/McGraw-Hill. Additional support for both teachers and students is available for this textbook at the [companion web site](#).

The textbook generally used in standard level Earth Science classes is *Earth Science* also published by Glencoe/McGraw-Hill. Additional support for both teachers and students is available for this textbook at the [companion web site](#).

Students enrolled in practical level Earth Science will use *Earth Science (Concepts and Challenges Series)* published by Globe-Fearon. This book is designed to present grade level appropriate content at a lower reading level (minus 2-3 grade levels).

Globe-Fearon also maintains a free [companion web site](#) for students and a [Virginia SOL correlation](#) for this textbook.