

SAMPLE

Notes For Readers

Sixth Grade

State Content Standard

Earth and Space Science

Processes That Shape the Earth ← Content Organizer

Benchmarks For Science Literacy, page 73 ← Page numbers refer to the pages in Benchmarks document.

Section essays clarify what “knowing” entails; sketch what students’ experience might likely include and what difficulties students might have. →

At this level, students are able to complete most of their understanding of the main features of the physical and biological factors that shape the face of the earth. Students should see as great a variety of landforms and soils as possible.

The Research Base

Benchmarks For Science Literacy, page 336 ← A summary of research findings relevant to how students think and learn about ideas in this section.



Students of all ages may hold the view that the world was always as it is now, or that any changes that have occurred must have been sudden and comprehensive (Freyberg, 1985). The students in these studies did not, however, have any formal instruction on the topics investigated. Moreover, middle-school students taught by traditional means are not able to construct coherent explanations about the causes of volcanoes and earthquakes (Duschl, Smith, Kesidou, Gitomer, & Schauble, 1992).

Benchmarks

A specific statement of what all students should know and be able to do at a specified time in their schooling. Benchmarks are used to measure a student’s progress toward meeting the standard. Science benchmarks are defined for grade bands K-2, 3-5, 6-8, 9-10, and 11-12. →

Identify that the lithosphere contains rocks and minerals and that minerals make up rocks. Describe how rocks and minerals are formed and/or classified.

A specific statement of the knowledge and/or skills that a student is expected to demonstrate at each grade level. These indicators serve as checkpoints that monitor progress toward the benchmarks.



Indicators

ES: State standard
science abbreviation for
Earth Science.



ES1. Describe the rock cycle and explain that there are sedimentary, igneous and metamorphic rocks that have distinct properties (e.g., color, texture) and are formed in different ways

SMART/Stretch Indicator.
Lower case letter denotes
SMART/Stretch Indicator



ES1a. Sedimentary rock buried deep enough may be reformed by pressure and heat, perhaps melting and recrystallizing into different kinds of rock. These reformed rock layers may be forced up again to become land surface or even mountains. Subsequently, this new rock too will erode. Rock bears evidence of the minerals, temperatures, and forces that created it

Key To Indicators:

ES = Earth Science

LS = Life Science

PS = Physical Science

ST = Science and Technology

SI = Scientific Inquiry

SWK = Scientific Ways of Knowing