

**COSI Toledo Distance Learning  
Science Rocks  
Ohio Academic Content Standards**

**Grade One**

**Earth and Space Sciences**

Earth Systems

1. Identify that resources are things that we get from the living (e.g., forests) and nonliving (e.g., minerals, water) environment and that resources are necessary to meet the needs and wants of a population.
2. Explain that the supply of many resources is limited but the supply can be extended through careful use, decreased use, reusing, and/or recycling.

Processes That Shape Earth

3. Explain that all organisms cause changes in the environment where they live; the changes can be very noticeable or slightly noticeable, fast or slow (e.g., spread of grass cover slowing soil erosion, tree roots slowly breaking sidewalks.)

**Scientific Inquiry**

Doing Scientific Inquiry

1. Ask "what if" questions.
2. Explore and pursue student-generated "what if" questions.

**Scientific Ways of Knowing**

Nature of Science

1. Recognize that scientific investigations involve asking open-ended questions. (How? What if?)

**Grade Three**

**Earth and Space Sciences**

Earth Systems

1. Compare distinct properties of rocks (e.g., color, layering, and texture.)
2. Observe and investigate that rocks are often found in layers.
3. Describe that smaller rocks come from the breakdown of larger rocks through the actions of plants and weather.
4. Observe and describe the composition of soil (e.g., small piece of rock and decomposed pieces of plants and animals, and products of plants and animals.)

**Grade Four**

**Earth and Space Sciences**

Processes That Shape the Earth

8. Describe how wind, water, and ice shape and reshape Earth's land surface by eroding rock and soil in some areas and depositing them in other areas producing characteristic landforms (e.g., dunes, deltas, and glacial moraines.)
9. Identify and describe how freezing, thawing, and plant growth reshape the land surface by causing the weathering of rock.

10. Describe evidence of changes on the Earth's surface in terms of slow processes (e.g., erosion, weathering, mountain building, and deposition) and rapid processes (e.g., volcanic eruptions, earthquakes, and landslides.)

## **Grade Six**

### **Earth and Space Sciences**

#### Earth Systems

1. 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.
2. Explain that rocks are made of one or more minerals.
3. Identify minerals by their characteristic properties.

## **Grade Eight**

### **Earth and Space Sciences**

#### Earth Systems

9. Describe the interior structure of the Earth and Earth's crust as divided into tectonic plates riding on top of the slow moving currents of magma in the mantle.
10. Explain that most major geological events (e.g., earthquakes, volcanic eruptions, hot spots, and mountain building) result from plate motion.
12. Explain that some processes involved in the rock cycle are directly related to thermal energy and forces in the mantle that drive plate motions.
13. Describe how landforms are created through a combination of destructive (e.g., weathering and erosion) and constructive processes (e.g., crustal deformation, volcanic eruptions, and deposition of sediment.)
14. Explain that folding, faulting, and uplifting can rearrange the rock layers so the youngest is not always on top.
15. Illustrate how the three primary types of plate boundaries (transform, divergent, and convergent) cause different landforms (e.g., mountains, volcanoes, and ocean trenches.)