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The National Content Standards (Grades K–4)

Earth materials are solid rocks and soils, water, and the gases of the atmosphere. The varied materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, or for growing the plants we use as food. Earth materials provide many of the resources that humans use.

The National Content Standards (Grades 5-8)

Some changes in the solid Earth can be described as the rock cycle. Old rocks at the Earth's surface weather, forming sediments that are buried, then compacted, heated, and often recrystallized into new rock. Eventually, those new rocks may be brought to the surface by the forces that drive plate motions, and the rock cycle continues.

The 10 Big Ideas About Geology & Corresponding Labs

1. Minerals are naturally occurring inorganic solids made of a single kind of material. These compounds are all crystalline, and their atoms are arranged in a regular, repeating pattern that is as much a part of the mineral's properties as its composition.

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2. Minerals are the building blocks of all rocks. Every rock is made of at least one mineral, but more often two or more that have combined under conditions that allow for rock formation.

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5. Extrusive igneous rocks are formed when molten rock, called lava, erupts from a volcano onto the surface of the Earth and solidifies. One way that this happens is that volcanoes erupt and expel molten lava. There are also cracks in the crust of the Earth that open up and ooze lava over hundreds of square miles.

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