

8th Grade Integrated Science
Standard 3

Geology

Essential Understanding

Students will understand the processes of rock and fossil formation.

	Objective #	Essential Learning Objectives
1	1a/1b/1c	I can compare rocks and minerals and describe how they are related.
2	1a	I can understand that rocks are made of minerals.
3	1b	I can define and explain the properties of minerals. Hardness, color, luster, streak, crystal structure, cleavage.
4	1c	I can identify the properties of a mineral. Hardness, color, luster, streak, crystal structure, cleavage.
5	1c	I can categorize rock samples as sedimentary, metamorphic, or igneous.
6	2a	I can draw and explain the rock cycle and the multiple ways that one rock type changes to another.
7	2b	I can explain different ways that energy changes rocks over time.
8	2c/2d	I can show and explain how gravity and erosion change the Earth's surface.
9	2e	I can explain how weather helps make soil.
10	2f	I can model and explain different ways fossils are made.
11	3a/3c	I can describe how sedimentary rock layers are deposited and why the youngest layers are usually on top, but not always.
12	3b	I can determine the relative ages of rock layers using diagrams or pictures.
13	3d	I can describe how fossils show evidence of the changing surface of the Earth.
14	3e	I can explain why younger rock layers contain recent fossils and older rock layers contain older fossils.
15	4a/4b	I can describe how earthquakes and volcanoes transfer energy from inside the Earth to cause changes to the Earth's surface.
16	4c	I can show the process of energy buildup and release in earthquakes.
17	4d	I can explain reasons why people don't always make decisions based on scientific findings.
18	4e	I can show how small changes add up to big changes on the Earth's surface.

Science Language students should know and use	volcano, earthquake, weathering, minerals, fossils, sedimentary, magma, metamorphic, rock cycle, igneous, sedimentation, deposition, geology, paleontology
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