366858

Rock Cycle Kit Lab Activity

Aligned With All Published National Standards

ward's science

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Instruction WARD470189-868 - V. 7/13

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* The Dimension I practices listed below are called out as **bold** words throughout the activity.

DIMENSION 1 Science and Engineering Practices

X	Asking questions (for science) and defining problems (for engineering)		Use mathematics and computational thinking
X	Developing and using models	X	Constructing explanations (for science) and designing solutions (for engineering)
X	Planning and carrying out investigations		Engaging in argument from evidence
	Analyzing and interpreting data	X	Obtaining, evaluating, and communicating information

DIMENSION 2 Cross Cutting Concepts

X	Patterns		Energy and matter: Flows, cycles, and conservation
	Cause and effect: Mechanism and explanation	X	Structure and function
X	Scale, proportion, and quantity	X	Stability and change
X	Systems and system models		

DIMENSION 3 Core Concepts

Discipline	Core Idea Focus
Earth and Space Science	ESS1: Earth's Place in the Universe
	ESS2: Earth's Systems

x Indicates standards covered in activity

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Middle School Standards Covered	High School Standards Covered
MS.ESS2-3: Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.	HS.ESS1-6: Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.
	HS.ESS2-1: Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.
	HS.ESS2-3: Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.

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standards and learning objectives

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Content Standards (K-12)			
	Systems, order, and organization	X	Evolution and equilibrium
X	Evidence, models, and explanation		Form and Function
X	Constancy, change, and measurement		

Earth and Space Science Standards Middle School		Earth and Space Science Standards High School	
	Systems, order, and organization		Evolution and equilibrium
X	Evidence, models, and explanation	X	Form and Function
X	Constancy, change, and measurement		

x Indicates standards covered in activity

benchmarks for science literacy (AAAS, © 1993)

1. The Nature of Science	1B: Scientific Inquiry
4. The Physical Setting	4B: The Earth
	4C: Processes that Shape the Earth
5. The Living Environment	5A: Diversity of Life
11. Common Themes	11A: Systems
	11B: Models

activity objectives:

- Recognize that most sedimentary rocks are formed from other rocks when rock particles are cemented together by minerals dissolved in water.
- Recognize that metamorphic rocks are formed from other rocks when heat and pressure have been applied.
- Recognize that the temperature in the interior of Earth is hot enough to melt rock, forming magma.
- Recognize that igneous rocks are formed from a hot mineral solution called magma.