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Fossil Excavation and Strata Deposition Lab Activity

Aligned With All Published National Standards

ward's science

IMGN2508061 (2508076)

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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

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

DIMENSION 2 Cross Cutting Concepts

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

DIMENSION 3 Core Concepts

Discipline	Core Idea Focus
Life Science	LS4: Biological Evolution: Unity and Diversity
Earth and Space Science	ESS2: Earth's Systems

× Indicates standards covered in activity

next generation science standards © 2013

Middle School Standards Covered	High School Standards Covered
MS.LS4-1: Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.	
MS.ESS2-3: Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and sea floor structures to provide evidence of the past plate motions.	

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standards and learning objectives

national science education standards © 1996

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

Earth and Space Science Standards Middle School		Earth and Space Science Standards High School
×	Earth's History	

× 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
11. Common Themes	11B: Models

activity objectives:

- Determine how fossils were deposited over the past three eras.
- Learn one method employed in excavating fossil remains.

time requirement:

Two 45 minute class periods.

Both parts of the lab can be accomplished by one of your classes over a two day period, or they can be alternated between several different classes, with the first class doing the deposition of the fossils in the strata, and the next class doing the excavation of those same fossils.