

ROCK UNKNOWNNS

STANDARDS

See summary of National Science Education Standards.

Original: <http://books.nap.edu/readingroom/books/nse/>

Standard Concept	General standard	Specific standard	General standard	Specific standard	General standard	Specific standard
Grade Level		K-4		5-8		9-12
Science as inquiry (A)	Abilities ... to do ... inquiry	A.1.4.1	Abilities ... to do ... inquiry	A.1.8.1	Abilities ... to do ... inquiry	A.1.12.1
		A.1.4.2		A.1.8.2		A.1.12.2
		A.1.4.3		A.1.8.3		A.1.12.4
		A.1.4.5		A.1.8.4		A.1.12.5
				A.1.8.5		A.1.12.6
				A.1.8.6		
				A.1.8.7		
	Understandings about ... inquiry	A.2.4.1	Understandings about ... inquiry	A.2.8.1	Understandings about ... inquiry	A.2.12.2
		A.2.4.2		A.2.8.2		A.2.12.5
		A.2.4.3		A.2.8.5		
		A.2.4.4		A.2.8.6		
		A.2.4.5				
		A.2.4.6				
Physical Science (B)	Properties of ... materials	B.1.4.1	Properties and changes of properties in matter	B.1.8.2		
		B.1.4.2				
Earth Science (D)	Properties of Earth materials	D.1.4.1	Structure of Earth system	D.1.8.4		



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INTRODUCTION

One of the basic pieces of information a geologist must note is the type of rock. The geologist uses this information to eventually determine such things as the origin of the rock, the properties, or possible uses of the rock. So students need to learn to identify a variety of rocks.

OBJECTIVE:

Students will learn the process of classifying and identifying basic types of rocks.

MATERIALS:

- Rock Specimens
- Rock Identification Tables, e.g., GeoMan's
- Magnifying Glass

PROCEDURE: (teacher instructions)

- 1) Number the rock specimens, using a permanent marker or possibly nail polish or paint.
- 2) Spread the specimens out on a table or counter on top of signs with their numbers.
- 3) Divide the class into groups.
- 4) Each group works with each specimen to determine its properties and to try to identify it.
- 5) The group records the properties that support the identification.
- 6) Each group reports the results of their work to the rest of the class.
- 7) The class discusses the identifications.
- 8) The class develops a rock identification work sheet, listing the properties to use, and possibly, a rock identification flow chart.

EVALUATION

- 1) Students compare their identification of the rocks with rocks correctly identified. If there are discrepancies, students discuss the properties of the rocks in order to resolve the errors.
- 2) How might the identification of each rock be used by a geologist?
- 3) How might the identification be used by a resource industry?

NOTE TO TEACHERS:

Using the rock identification charts should suggest procedures to the students.

RESOURCES

- GeoMan's Mineral and Rock Glossary:
<http://jersey.uoregon.edu/~mstrick/MinRockID/MinRockGloss.html>
- GeoMan's Rock Identification
<http://jersey.uoregon.edu/~mstrick/MinRockID/RockID/RockIDChart.html>

