

0.4: Rocks and Minerals – Uses Past and Present

Grade Level: Kindergarten

Objectives:

Students will learn the importance of rocks in past and present societies. Student will discover the many uses of rocks.

State Learning Goals Met In This Lesson:

State Goal 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments, and to solve problems.

Learning Standard 11A: Know and apply the concepts, principles, and processes of scientific inquiry.

Benchmark 11A.1a: Describe an observed event.

State Goal 13: Understand the relationship among science, technology and society in historical and contemporary contexts.

Learning Standard 13 A: Know and apply the accepted practices of science.

Benchmark 13A.1a: Use basic safety practices.

Benchmark 13.B.1d: Identify and describe ways that science and technology affect people's everyday lives.

Background:

This lesson was introduced by reading the book, *Let's Go Collecting Rocks*, in a previous lesson, "Collecting Rocks." It is a super introduction to a unit on rocks and minerals. While not containing a lot of in depth information, it provides a broad base of general rock and mineral knowledge such as how different rocks are formed, uses of rocks, and how to start your own rock collection. Students will need to be instructed in the proper care and handling of rocks for safety reasons.

Materials:

Teacher:

Let's Go Collecting Rocks, by Roma Gans

Eye Witness Books Rocks and Minerals, by Dr. R.F. Symes

Cool Facts Rocks and Minerals, by Anna Claybourne

Hot glue gun (optional)

Each student:

One rock (Rocks collected from the previous lesson may be used)

Drawing paper

Pencils

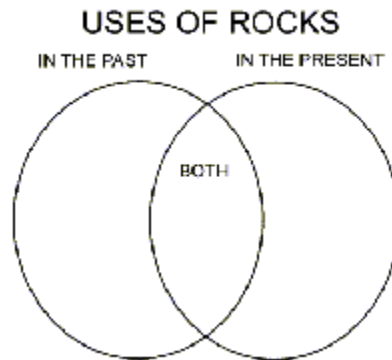
Crayons

Glue

Procedure:

1. Gather the students together to engage them in a brainstorming activity pertaining to the uses of rocks in the past and in the present. You may want to

incorporate the student responses in a Venn diagram, as some uses will be in the past, some in the present, and some in both.



2. As the students begin to run out of ideas, you can jump start them again by referring to the books mentioned in the teacher material section of this lesson. As this list grows, students should become aware of how important rocks and minerals are to society.

3. After successfully compiling a list of many varied uses of rocks and minerals, explain to the students that they will choose a rock from the bag and decide how it can be used.

4. Students will glue the rock onto the drawing paper and then incorporate the rock into a pencil and crayon drawing of its use, for example, the rock may become part of a road, statue, jewelry, weapon, tool, etc.

5. These finished products can be nicely displayed in the hall or room.

Tip:

1. If the rocks are too large to be held on with regular school glue, you may need to use hot glue instead.

2. If time does not allow for the use of actual rocks, this project could become a "big book" instead.

Extensions:

1. Using their imagination, students may create new uses for rocks and minerals for the future. Students could draw a picture or write a brief story about the new use of their rock.

2. After having read one or more of the following stories, have the students think of a fictional use of a rock as demonstrated in these books. Again, the students could draw or write about their make-believe rock. They may even want to demonstrate its use by the possible incorporation of magic rocks, pet rocks, talking rocks, etc.

Stone Soup, by Marcia Brown

Sylvester and the Magic Pebble, by William Stieg

Space Rock, by Jon Buller and Susan Schade

Assessment:

Assessment of this lesson will consist of teacher observation during the

brainstorming session and the "use of my rock" picture. Was the student able to accurately draw or describe the use of his/her rock? Does the student have an understanding of the importance of rocks as portrayed in his/her picture?

Resources:

Non-Fiction Resources:

Claybourne, Anna. Cool Facts Rocks and Minerals. Illustrated by Michael Posen. Parragon Publishing. Bath, UK, 2000.

Gans, Roma. Let's Go Rock Collecting. Illustrated by Holly Keller. HarperCollins Publishers. New York, 1997.

Symes, Dr. R.F. and the staff of the Natural History Museum of London. Eyewitness Books Rocks and Minerals. Alfred A. Knopf. New York, 1988.

Fiction Resources:

Brown, Marcia. Stone Soup. Charles Scibner's Sons. New York, 1947.

Buller, Jon and Susan Schade. Space Rock. Randon House. New York, 1988.

Stieg, William. Sylvester and the Magic Pebble. Prentice-Hall Books for Young Readers. New York, 1969.

Internet Resources:

Illinois State Goals
<http://www.isbe.net>

Illinois State Museum
<http://www.museum.state.il.us/>

Rock Collecting
<http://www.fi.edu/fellows/fellow1/oct98/lit/payton1.htm>

Thematic Unit Rocks and Minerals
<http://www.libsci.sc.edu/miller/rocks.htm>