

# KNOW YOUR ROCKS

## KINDERGARTEN - SECOND

### Earth Science TEKS

*Kindergarten:* K.7A, K.7C

*First Grade:* 1.7A, 1.7C

*Second Grade:* 2.7A, 2.7C

### Vocabulary

dull, luster, manmade resource, natural resource, properties, rocks, rough, sediment, shiny, smooth, texture

### Pre-Show Activity

#### Pre-Show Lesson: Know Your Rocks

Post this question on the board: "What are rocks good for?"

#### *Materials:*

Per group: small stone, pebble, baggie of sand, large stone, piece of gravel, baggie of rock dust, picture of smooth boulder, picture of jagged boulder, various rocks to observe

Per student: hand lens, colored pencils

#### *Procedure:*

1. Give each group a small stone, a pebble, a small baggie of sand, a larger stone, a piece of gravel, a small baggie of dust from two stones rubbed together (you can rub some clay together to get this), a picture of a smooth boulder and a picture of a jagged boulder. Tell students to sort the objects into two groups; rocks and non-rocks. If they finish, they need to try to come up with a rule that they followed to decide if an object was a rock or not.
2. Debrief with students. Students should understand that all of the above objects are rocks. Rocks are a combination of minerals. If an object is a natural resource made of minerals, then it is a rock. Rocks can be described by their size, shape and texture. You may want

to mention that when rocks are broken down into very small pieces like the sand and dust, we call that sediment.

3. Ask kids what they would like to know about rocks. You may want to create a chart or just discuss ideas with students.

Tell students that today they are going to observe, classify and describe rocks. What are some words that we can use to describe the properties of a rock? Make a chart. Younger students can use the picture chart in Appendix A-1 to help them.

- Color - brown, gray, tan, white, etc.
- Shape - round, square, oval, triangular, irregular, etc.
- Size - small like a penny or medium like a fist (just saying small or medium doesn't give enough information. Students should give a frame of reference or a measurement).
- Texture - rough or bumpy, smooth, etc.
- Luster - shiny, dull, etc.

4. Give each group some rocks. Students will use a hand lens to observe the rocks. They should make a scientific drawing of at least three rocks and describe some of the properties of the rock in their science notebooks. Youngest students will make a simple drawing of their rocks, and will observe properties of them with your help and the chart in Appendix A-1.

Drawing of Rock	Properties of the Rock (color, shape, size, texture, luster)

5. Bring students to the carpet. Have them turn and tell a partner what they learned about rocks today.

Students should be aware that all rocks are not the same. This is because they are made of different minerals.

6. Ask students, "So, what good is a rock?" You may want to have some manmade objects that are made from rocks out in front of you: concrete, brick, glass. And some that are not: wood, fabric, paper, metal, etc. Discuss with kids the uses of rocks.

## Post-Show Enrichment Activities

### Activity One: Rock Learning Center

*Materials:* *If You Find a Rock* by Peggy Christian, hand lenses, rock field guides.

*Procedure:*

1. Read the book *If You Find a Rock* by Peggy Christian.
2. Create a rock learning center. Ask students to bring in rocks that they have found. Keep hand lenses and rock field guides at the center. Student may visit the center during their free time to try to identify rocks or you can turn this into a rotation during center time.

Students can practice their classifying skills by sorting the rocks by:

- Rough or Smooth
- Shiny or Dull
- Sort by Color
- Sort by Shape

### Activity Two: Rock Hunt

*Materials:* Science notebooks or columned worksheets, writing utensil.

*Procedure:*

1. Students will create a two column chart in their science notebooks. One column should be labeled “Made from Rock”, or have a rock picture on the top. The second column should be labeled “Not Made of Rock”, or have a rock picture with an X over it on top.
2. Students will go on a walk around the school filling out their data charts. They should walk both inside the school and outside the school to look for objects. They can either draw the objects that they see (for younger students) or write them in the columns. You may want to allow students include anything that is made from minerals in the rock column also. This would include: TVs, computers, rugs, windows, telephone, walls, faucets, etc. Even notebook paper is made with minerals in it.

### Activity Three: Rock Sort

*Materials:* Book *Hard, Soft, Smooth and Rough* by Natalie Rosinsky, rocks from pre-show lesson, Venn diagram.

*Procedure:*

1. Read the book *Hard, Soft, Smooth and Rough* by Natalie Rosinsky.
2. Using the rocks from the pre-show lesson, have students sort them according to color. Sort again, according to shape. Sort a final time, according to texture. If time permits, let students devise their own rules for sorting.
3. Possibly give them a Venn diagram to practice sorting also; shiny and rough could be the categories. If the rock doesn't fit into either category, students would place it outside the Venn diagram.

### Activity Four: Rock Art

*Materials:* smooth rocks, acrylic paint, paint brushes, glue, googly eyes, paper mache (optional).

1. Students will decorate a rock. They can create a rock pet, rock paper weight or just a rock decoration. You will need acrylic paint, a smooth rock for each student, paint brushes, glue and googly eyes.
2. Before painting, students should sketch out their plan.
3. Students will then paint their rock. They may want to attach googly eyes if they are making a pet rock.
4. A different option would be to paper mache the rock. Students would cut out pictures of small flowers, animals, etc. and attach them to the rock using paper mache glue. You can make this using white flour and water or white glue and water. Students will paper mache under the picture and on top of it.
5. You can spray a layer of clear acrylic coating on top of the rocks to protect them. This should be done outside in an open area.

### Resources:

You can get some very inexpensive rock kits for your classroom. Each kit contains 8 small samples of Texas rocks and a guide. Contact the Bureau of Economic Geology at the University of Texas at Austin (512- 471-7144 or [pubsales@beg.utexas.edu](mailto:pubsales@beg.utexas.edu)).

Appendix

A-1

# Color - brown, gray, tan, white...

Texture:



Smooth



Rough

Luster:

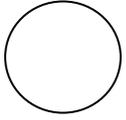


Shiny



Dull

## Shape –



round,



square,



oval,



triangular,



irregular...