Meet a Rock

Grades: K-2

Estimated Time: 30-45 minutes

Standards Met:

- K-2 grade:
  - *Science N2.A.1 Students* know how to make observations and give descriptions using words, numbers and drawings.
  - *Science N2.A.3* Students know observable patterns can be used to predict future events or sort items.
  - *Science L.2.B.1* Students know humans and other animals use their senses to know their world.
  - *Science E.2.C.3* Students know rocks come in many sizes and shapes, with various textures and colors.
  - *Math 5.K.1* Collect, organize and record data using objects and pictures. Represent data in a variety of ways in response to questions posed by teachers.
  - *Math 5.2.1* Use tables, pictographs and graphs to represent data.

Materials Needed:

- One small paper or plastic bag per student
- One Meet a Rock worksheet per student (attached)
- One writing utensil per student
- Clipboards or other writing surface (optional)
- Magnifying lens for every 1-5 students (optional)
- Copy of *Everybody Needs a Rock* by Byrd Baylor or story printout (attached)

Objective:
Observe and categorize different characteristics of rocks using senses
Record and utilize observed data

Procedure:
Break the students into small groups, each group with a chaperone. Have each group find a place to sit and read *Everybody Needs a Rock* to the class. When you are done, tell students that they are going to go and find some special rocks of their own. Have students go with their chaperone and collect no more than five interesting and different-looking rocks each, putting them in their respective paper or plastic bags.

Once everyone is done, have students sit back with their groups and examine the rocks they collected. Tell them to study the rocks carefully, using their senses. How do the rocks look, feel, and smell? Remind students not to use their sense of taste for this activity. Have them look at their rocks with a magnifying lens if using.

After students have had some time to examine their rocks, have them pick out their favorite, setting the others aside for the time being.

In each group, have the students put their favorite rocks in a central pile. Have them sort their rocks into two piles depending on adjectives they came up with. For example, if a student comes up with smooth, they could separate their rocks into smooth and rough piles. Have them go through at least one adjective from each student, sorting every time. Remind students they can sort their rocks by color, shape, size, or texture. After they have sorted several times, have students come up with an adjective that fits all of the rocks in their group.

Once finished, have each student retrieve their favorite rock from the pile. Hand out the Meet a Rock worksheet and have them put their group's adjective on it under the first line. Then go around the class and ask the groups which words they came up with to describe all their rocks. Have students put each one on their worksheet.

Sources:
Adapted from *Ranger Rick's NatureScope: Geology: the Active Earth.* National Wildlife Federation, 1997.

Everybody Needs a Rock. Byrd Baylor, 1985.

Submitted by Stacy Dahl

Once everyone has shared their adjectives, if necessary, come up with more until every student has eight on their worksheet.

Go through the different adjectives, asking for a show of hands from everyone in the class who has a rock that fits that description. Have students record that number on the graph by finding the appropriate number on the left and coloring in the bar up to that point within the appropriate word column. Continue until the graphs are complete. At this point, you can describe what a graph is and how it is useful. Ask some simple questions about the rocks. Were there more smooth rocks or more shiny rocks? How many people had red rocks? Have them look off of their graphs for the information.

Variation: For younger students, you can have them just select one favorite rock instead of five. After you give them time to examine their rock, you can fill out the graph together as a class on a large piece of paper.

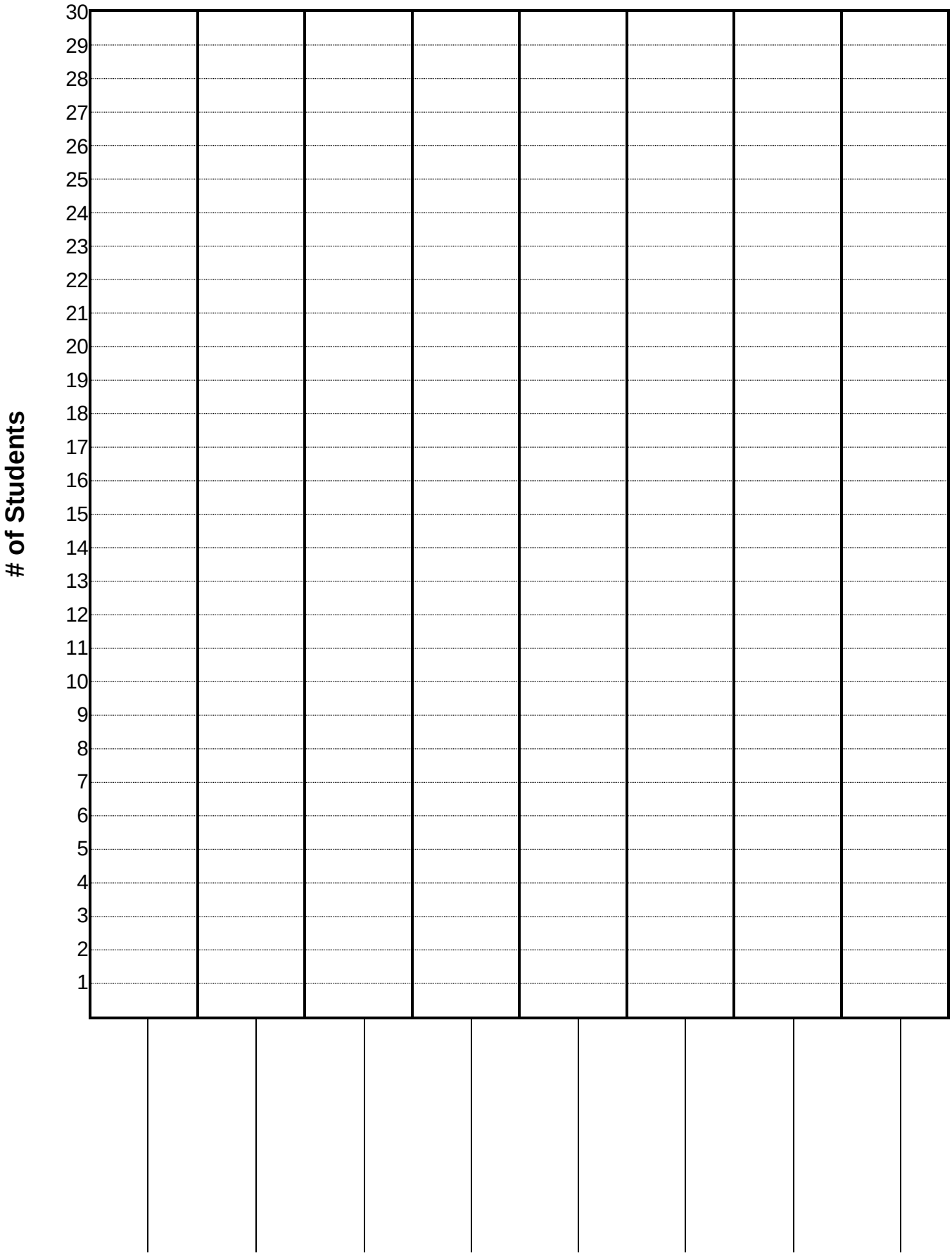
Lead the students in a discussion about their favorite rock. Why do they like that rock better than the others? Did they follow what was suggested in *Everybody Needs a Rock*? Why or why not?

Once the activity is finished, have students return the rocks as close as possible to where they found them. Explain that because Red Rock NCA is a protected area, nothing can be removed from it, even a special rock. Suggest that if they would like to find a special rock for their own to keep that they look in their own yard or visit a park in town.

Suggested Locations:
Open area where students can explore for rocks.

Pine Creek Trail: 3,6, or 7	**Red Spring Boardwalk:** 1
Fire Ecology Loop: 3 or 4	**Moenkopi Loop:** 3,6,7,8, or 9

Meet a Rock


30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
# of Students
Rock Characteristics

Everybody Needs a Rock

By Byrd Baylor

Everybody needs a rock.

I'm sorry for kids who don't have a rock for a friend.

I'm sorry for kids who only have TRICYCLES, BICYCLES, HORSES, ELEPHANTS, GOLDFISH, THREE-ROOM PLAYHOUSES, FIRE ENGINES, WIND UP DRAGONS, AND THINGS LIKE THAT – if they don't have a rock for a friend.

That's why I'm giving them my own TEN RULES for finding a rock…

Not just any rock. I mean a special rock that you find yourself and keep as long as you can – maybe forever.

If somebody says, "What's so special about that rock?" don't even tell them. I don't.

Nobody is supposed to know what's special about another person's rock.

All right. Here are the rules:

RULE NUMBER 1: If you can, go to a mountain made out of nothing but a hundred million small, shiny, beautiful, roundish rocks. But if you can't, anyplace will do. Even an alley. Even a sandy road.

RULE NUMBER 2: When you are looking at rocks, don't let mothers or fathers or sisters or brothers or even best friends talk to you. You should choose a rock when everything is quiet. Don't let dogs bark at you or bees buzz at you. But if they do, DON'T WORRY. (The worst thing you can do is go rock hunting when you are worried.)

RULE NUMBER 3: Bend over. More. Even more. You may have to sit on the ground with your head almost touching the earth. You have to look a rock right in the eye. Otherwise, don't blame me if you can't find a good one.

RULE NUMBER 4: Don't get a rock that is too big. You'll always be sorry. It won't fit your hand right and it won't fit in your poket. A rock as big as an apple is too big. A rock as big as a horse is MUCH too big.

RULE NUMBER 5: Don't choose a rock that is too small. It will only be easy to lose or a mouse might eat it, thinking it is a seed. (Believe me, that happened to a boy in the state of Arizona.)

RULE NUMBER 6: The size must be perfect. It has to feel easy in your hand when you close your fingers over it. It has to feel jumpy in your pocket when you run. Some people touch a rock a thousand times a day. There aren't many things that feel as good as a rock – if the rock is perfect.

RULE NUMBER 7: Look for the perfect color. That could be a sort of pinkish gray with bits of silvery shine in it. Some rocks that look brown are really other colors, but you only see them when you squint and when the sun is right. Another way to see colors is to dip your rock in a clear mountain stream – if one is passing by.

RULE NUMBER 8: The shape of the rock is up to you. (There is a girl in Alaska who only likes flat rocks. Don't ask me why. I like them lumpy.) The thing to remember about shapes is this: Any rock looks good with a hundred other rocks around it on a hill. But your rock is going to be special and should look goo by itself in the bathtub.

RULE NUMBER 9: Always sniff a rock. Rocks have their own smells. Some kids can tell by sniffing whether a rock came from the middle of the earth, or from an ocean, or from a mountain where wind and sun touched it every day for a million years. You'll find out that grown-ups can't tell these things. Too bad for them. They just can't smell as well as kids can.

RULE NUMBER 10: Don't ask anybody to help you choose. I've seen a lizard pick one rock out of a desert full of rocks and go sit there alone. I've seen a snail pass up twenty rocks and spend all day getting to the one it wanted. You have to make up your own mind. You'll *know.*

All right, that's ten rules. If you think of any more write them down yourself. I'm going to play a game that takes just me and one rock to play.

I happen to have a rock here in my hand…