

My Pet Rock

Objectives: Students will find an interesting rock. By the end of the unit, they will get to know their rock very well and have written a “history” of their rock. Hopefully students will come to see their rock not just as a “lump” but as an integral part of the changing Earth.

Materials:

- Rocks brought in by students (including a few extras for those who forgot)
 - Hand lenses
 - Rulers
 - Chart paper
 - Markers
1. Have students go home and find an interesting rock. Should be small enough that you can hold it in one hand, but big enough that you can see it easily. Specify not to bring in man-made materials, such as asphalt, concrete, scrap metal, etc. (You may want to show examples of those materials so they understand what they look like)
 2. Have students make as many observations as they can. Stress describing both appearance, size, shape, apparent weight. They should use drawings as well as words.
 3. As a fun activity to stress the importance of good observations, have them put their rocks together in a pile. Students close their eyes, and the teacher mixes up their rocks. Then have the students pick out their rock. Did they have difficulty finding their rock? As a further challenge do this activity again but have them try to find their rocks with eyes closed.
 4. Students should make a list of questions about their rock. Group the questions into similar categories, and post these questions. You may want to have a short discussion with your class about the questions they have, what they observed, etc.
 5. Be sure to find a way to label the rocks and set them aside so you can keep referring back to the rocks.

- The lessons on basic geology follow this introduction.

Pet Rock Biography

At the end of the unit, students will create a “biography of their pet rock”. This history should be based on all the observations they’ve made, what they’ve learned about rock and mineral identification, structure of the earth and earth processes, etc.

This is the kind of project that lends itself to a lot of creativity, so it’s probably best to give kids options as the product they’ll create to share their “biography”. Examples include (but are not limited to) a biography in essay form, a comic strip, an illustrated children’s book, a pop-up book, a video, a power point presentation.

Suggested outline for the Pet Rock Biography:

1. As you proceed through activities around the basic geologic processes, periodically come back to the “pet rock”. What general rock type is it? (Metamorphic, Igneous, Sedimentary

or some combination) What mineral(s) might be present?

2. Identification of the rock – go through a process of having the students identify the specific rock type. They may very well have a great deal of trouble (as may you!), but the point is to go back to evidence, make it clear what’s an educated guess as opposed to a more certain identification. This is an important time to bring out whatever rock identification books and keys you can find. There are many online guides as well (be careful to check the sources!). It may be that the student has to go with a “best guess” as opposed to a definitive identification.
3. Going with their identification, what might be the origin of their rock? Do they know if the rock is local? What geologic process might explain *where* and *when* this rock was formed? It’s important that students understand that there is no real “right” answer here – there are better answers based on evidence, but given the limited information we’re not asking them to produce the actual true history of this rock. Again, we’re training them to use evidence to justify a hypothesis.
4. Have students choose their format to write up the biography (we’ve left the details out here since classes vary widely) and proceed to have them complete the assignment.

4. Using any guides (print or electronic) try to tell something about the identity of your rock. It is understood that you may not be sure, and may change your mind as you learn more about rocks. That's fine. Give evidence for your preliminary identification.

Name:

Section:

Date:

Pet Rock Redux

Now that you have learned a bit more about geology, both rocks and minerals and how the earth works, it is time to revisit your pet rock. First, get out your rock and your original pet rock data packet for reference. Then using what you have learned and any field guides and references available, answer the following questions.

1. Is your pet rock a rock or a mineral, or both?
2. How do you know? (What is your evidence?)
3. What mineral(s) do you think might be in your rock?
4. What is your evidence for those particular minerals?
5. Do you think your rock is igneous, sedimentary or metamorphic (or perhaps is it a mixture of two or three types?)
6. Again, what is your evidence?
7. Now to some specifics about your rock: if you think your rock is igneous, do you think it formed quickly or slowly? Do you think it is intrusive or extrusive

