Stokes Nature Center

Geology Outreach

Teacher Pre-Visit

Grades: 4
Subjects: geology, art
Skills: observation, scientific methodology
Objective: Students will make observations about rock characteristics.
Materials: Rock Observations page, vinegar, paper, crayons, colored pencils or markers, rulers

Lesson Plan

1. **Ask students to bring a rock from home, or find one in the schoolyard.**

2. **When all the students have their rocks, explain that they are going to study and make observations about their rock.** One of the observations is whether a rock fizzes or not with vinegar. Chemicals in vinegar react with chemicals in some rocks to make little bubbles like the carbon dioxide bubbles in soda pop. If a rock fizzes with vinegar, it has a mineral called calcium carbonate in it. The limestone rocks in the canyons and mountains of this area have this mineral. You can set up a station where the students can test this themselves, or you could have the students come to you for the test.

3. **Hand out the Rock Observations page and have the students draw and describe their rock.**

4. **Once the students have completed their rock observations, have them find a partner for a back-to-back drawing. Instruct the kids to keep their rocks hidden from their partner.** The partners will sit back-to-back and will take turns describing their rock while the other person draws it from description only. Remind the students to include some of the details from their Rock Observation page: how big the rock is, what its shape is, what color(s) it has.

5. **After both students have sketched their partner's rocks, from description only, they can show each other their pictures and their rocks, and see how well they did.** They can also compare notes from their Rock Observations page and see if their rocks had similar characteristics.

6. **To wrap up, you could take a quick poll and have students raise their hands if their rock fizzed, and then list some of the variety of other characteristics that the students observed.**