

3 -5 Earth Science
Southern Nevada Regional Professional Development Program



How do rocks react to vinegar?

MATERIALS

- Collection of rocks
- Vinegar
- Plastic cup for each rock
- Small samples of calcite

PROCEDURES

1. Place the sample of calcite into a cup.
2. Pour about 25 ml of vinegar on the calcite.
3. Observe what happens (The reaction between the calcite and vinegar will produce continuous, tiny bubbles that form strings).
4. Perform the same procedure with three or four of the rocks from the collection.
5. Do tiny, continuous bubbles occur with all of the rocks?
6. Group the rocks according to the way they reacted to the vinegar.

TEACHER INFORMATION

Geologists use the *acid test* to determine if calcium carbonate is contained in rocks. This test is normally performed with dilute hydrochloric acid (HCl). Vinegar is a weak acid and can be used to perform this test.

Limestone and marble are rocks that will fizz when the *acid test* is done.

NOTE: *Be sure that the bubbles are tiny and continuous and form strings. Air pocket bubbles are larger and not continuous. They tend to cling to the rock for a while before they rise to the surface.*

Nevada State Science Standard

E.5.C.4 – *Students know rock is composed of different combinations of minerals*