

# BUILD a Simple Volcano

On May 18, 1980, Mount St. Helens erupted in Washington State, shocking the nation and blanketing much of the country in volcanic ash. To give you a rough idea of how volcanoes work, we're going to build a simple volcano model using the ever-popular (and safe) chemical reaction between vinegar (acetic acid) and baking soda (sodium bicarbonate), adding in food dye to give the erupting "lava" some color.

## WHAT YOU NEED

Small container, such as an empty medicine bottle or an empty bubbles container  
A few tablespoons of baking soda  
Red food coloring  
Paper or styrofoam cup  
Scissors  
Vinegar, enough to cover the baking soda

## WHAT TO DO

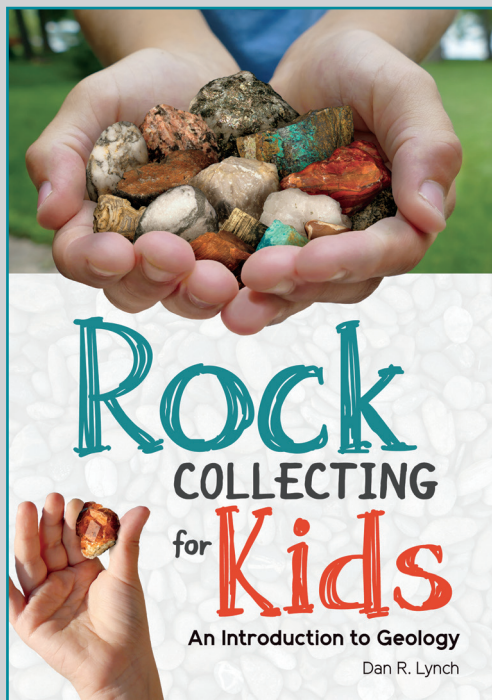
Find a flat spot\* that's okay to get wet, such as a sidewalk. Put the baking soda into the small container, add a few drops of food coloring, and set it on the ground. Cut a circular hole (about the same size as the container's opening) into the bottom of the cup. Turn the cup upside down, and place it over the container. (The sides of the cup are the volcano, and the hole in the center is the crater.) The hole in the cup should look down into the container.



Pour vinegar through the hole, into the container. When the two chemicals mix, the volcano "erupts" because of the chemical reaction between vinegar (acetic acid) and baking soda (sodium bicarbonate). The reaction produces water, carbon dioxide—and lots of bubbles. They will quickly overtake the container, just like magma is sometimes forced out a volcano by gas or pressure. (When magma reaches the surface of the Earth, it's known as lava.)

\*Kids often like to pour lots of vinegar and baking soda into the mix, so it's best to do this experiment outside. That way, there's decent ventilation, and you'll avoid potential stains from the food coloring.

## Rock Collecting Is Simple and Fun!



Nature's treasures are just beneath our feet, waiting to be discovered! With this book, you'll experience the excitement of finding, collecting, and identifying rocks and minerals. Dan R. Lynch, author of many field guides, presents an introduction to our amazing Earth with easy-to-understand guidelines for collecting that the whole family will learn from and enjoy.

### INSIDE YOU'LL FIND

- "How to" section, including details on what to look for and where to look
- Geology basics, such as where rocks come from and how Earth's surface changes over time
- Full-color photographs and ID tips
- Identification guide to 75 collectible rocks & minerals



AdventureWithKeen.com