Educational Innovations, Inc.®

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Crystal Growing Dolomite

The Origin of Popcorn Rocks...
The rocks contained in this package are magnesium rich dolomite. Dolomite is an evaporative sedimentary rock made up of a variety of sediments and minerals. This dolomite is actually somewhat unique in that it possesses an amazing property that is not necessarily common to other dolomite samples. When placed in distilled white vinegar, this dolomite grows beautiful white aragonite crystals.

This characteristic was first discovered in 1981 by Mr. Richard D. Barnes, then a geology student at the University of Utah, who was working with fossil specimens of horn coral that he had collected. Typically, horn corals are preserved in limestone, a rock that is composed of calcium carbonate, which reacts with vinegar and dissolves in that weak acid so that the fossil can be removed and studied. The interesting thing about this rock is that is did not dissolve but rather produced spectacular, white, bulbous crystals, resembling popped kernels of corn. That is how these rocks came to have the commercial name, *popcorn rocks*. In going back to the site, Mr. Barnes determined that this rock layer was actually an ancient lagoon that had been surrounded by a coral reef millions of years ago. He attributes the unique, crystal growing property of the rock to the residual minerals deposited in the rock layers by sea grasses that were present in the lagoon at that time.

Materials:

- Sample of Crystal growing dolomite
- Small plastic or glass bowl
- Distilled white vinegar (available from the supermarket)

Instructions:

1. Place an unwashed sample of crystal growing dolomite in a small glass or plastic bowl.
2. Pour distilled white vinegar over the sample until it is nearly submerged. The rock should be just barely sticking above the surface of the vinegar.
3. Place the bowl with the rock on a shelf or windowsill where it can remain undisturbed but can be easily observed. The warmer the location, the faster the vinegar will evaporate and the more quickly your aragonite crystals will appear and grow.
4. Observe the dolomite every day as the aragonite crystals grow atop the rock. Be careful not to touch them at this point as they are very delicate and will drop off.
5. Let the bowl sit undisturbed until ALL the vinegar has evaporated and the rock is COMPLETELY DRY.

At this point, the rock may be picked up and examined. Note the beautiful aragonite crystals. Also examine the original dolomite sample and how it has changed. Proudly display your fine sample for all to see!

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