GET OUT! Kids' Club

Crystal Egg Geodes

8 & Up

It takes thousands of years for geodes, hollow rocks lined with mineral crystals, to form naturally. You can make one yourself without leaving home. A crystal egg geode requires a few simple household ingredients.

Supplies:

◊ clean eggshells

◊ hot water and boiling water

◊ various soluble solids (pick one), such as table salt, rock salt, sugar, baking soda, Epsom salts, sea salt, borax, or cream of tartar (they are all crystals, see their shapes with a magnifying glass)

◊ glass measuring cup or coffee mug and spoons

◊ food coloring

◊ mini-muffin tin or ice cube tray

Procedure:

1. For best effect, crack eggs in half lengthwise. Use small sharp scissors to poke a hole and carefully snip all the way around. They do not need to be perfect, your geodes will be beautiful.

2. Under hot water rub the inside if the shell to remove all of the membrane. It will go mouldy and spoil your geode if left in.

3. Set your shells upright on the muffin tin/ice cube tray.

4. In the cup, pour 1/2 cup of boiling water, add 1/4 cup of the solid you are using (sugar or salt etc.). Stir well, keep stirring, and adding a spoonful more of the solid until no more will dissolve - this is now a supersaturated mixture. Add food colouring to suit.

5. Very carefully pour, or spoon, the mixture to fill the eggshells. Fill them as full as you can without tipping them or overflowing.

6. Set the tray of eggs in a safe place to allow the water to evaporate. You will have a beautiful crystal geode in 15-24 hours. A bottle cap will make a nice stand for displaying your geode.

How does It work? The soluble (dissolvable) solid uses the energy of the hot water to help it dissolve until there is no more room between the molecules in the solution. This creates a supersaturated solution, meaning so much of the solid has dissolved in the water that the water cannot dissolve any more. As the solution cools and loses energy, the solid begins to re-form. The slow cooling and evaporation cause crystals to grow which are larger than the original ones.

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