

Egg Shell Geodes

Method

- Carefully crack each egg so you can keep the majority of the shell intact. Cracking the egg in half is best.
- Rinse each egg shell, remove all membranes and pat it dry.
- Bring 4 cups of water to a boil.
- Stir in 1 3/4 cups (or more) Borax until it dissolves. There should be a little bit of borax at the bottom of the pan. This indicates that the solution is super saturated.
- Set out 1 plastic cup for each color geode that is going to be created.
- Pour 3/4 cup of the super saturated borax mixture into each cup.
- Add food coloring to each cup and stir.
- Allow mixture to cool, until it is safe to be handled, but not too cool, you want to add your eggshells while the mixture is still hot.
- Place an egg shell down into each cup making sure the inside of the eggshell is face up.
- Let the eggshells sit in the cups over night or even for 2 nights for plenty of crystals to grow.
- DO NOT disturb the crystals while they are growing, but after some good crystal growth is seen, remove geodes from colored water and dry on paper towels over night.

Materials

- Eggs
- 1 3/4 Cups Borax Powder
- Plastic Cups
- Food Coloring
- 4 cups Boiling Water



**THE CITIZEN
SCIENCE LAB**

Geode Guide

- From the outside geodes look like common rocks!
- If a rock feels lighter than surrounding rocks, it might be a geode!
- Most geodes contain clear quartz, purple amethyst, agate, chalcedony, or jasper.
- Geodes take a very long time to form.



- A super saturated solution has more powder in it than the liquid can hold because it is hot.
- As a supersaturated solution cools, the dissolved particles will fall out of solution onto the egg shells and form crystals!