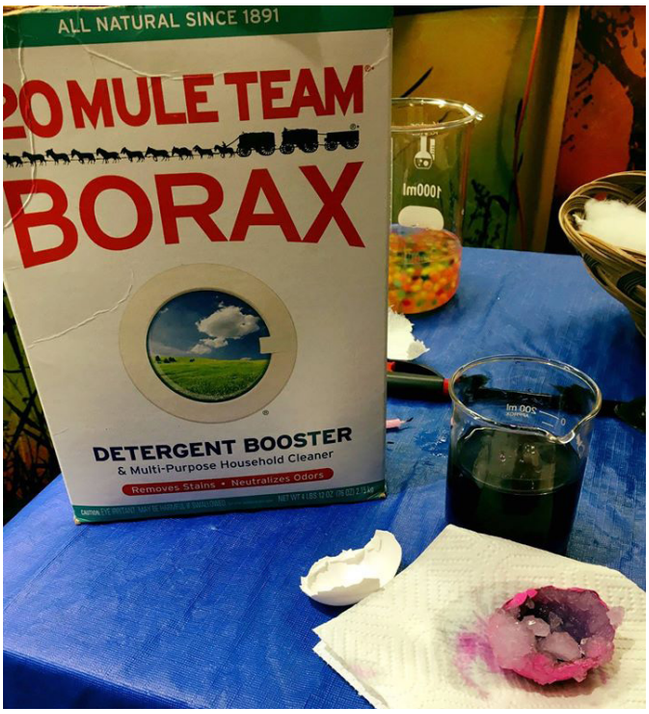
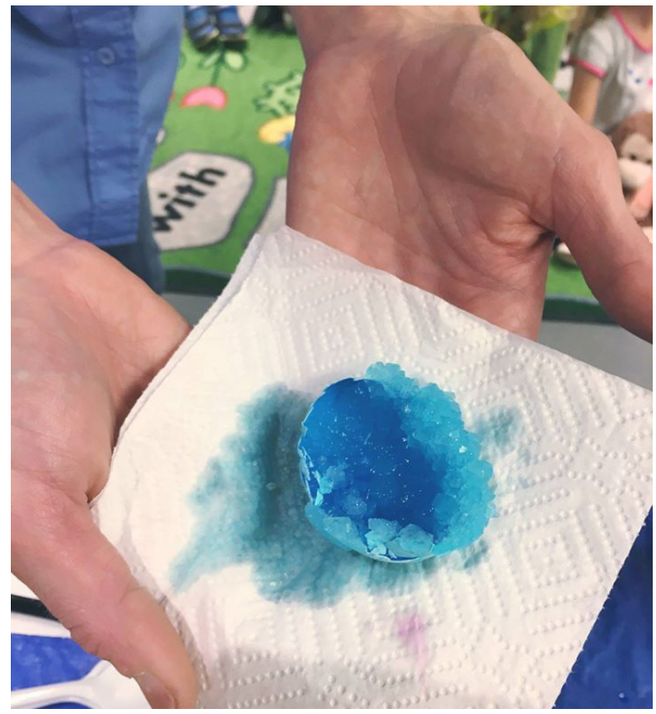
at home *discoveries*

egg geodes





A lesson in chemistry just in time for Easter!

Materials:

- Eggs (each egg makes up to two geodes)
- Food coloring
- 4 cups of boiling water
- 1 ¾ cups of Borax
- Wide-mouthed containers (such as Mason jars)

Directions:

1. Break an egg lengthwise by gently tapping it around the edge of a bowl. Empty contents of egg and thoroughly rinse the shell. Gently pat the shell dry. (Use a half shell per container of food coloring. If you're using 4 colors, break 2 eggs and use the 4 halves.)

2. Boil 4 cups of water in large sauce pan.

3. Add the Borax powder to boiling water, stir until dissolved (there should be some residual powder at bottom of pan.)

4. Pour ¾ cup of Borax water to a wide-mouthed mason jar (or another wide opening glass container) and add a food coloring. Stir.

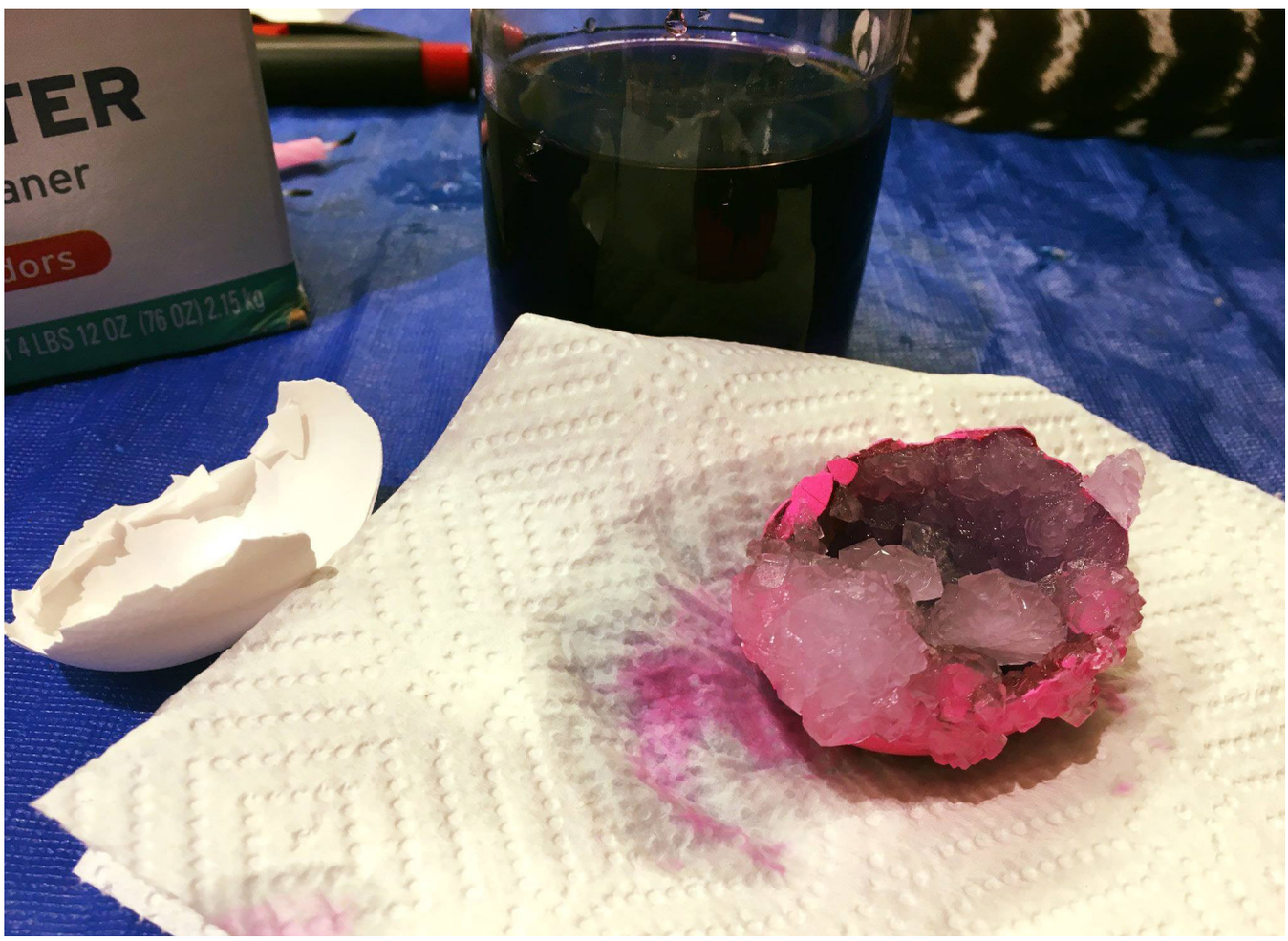
5. Add another ¾ cup of Borax water to another glass container, add another color, then stir. Repeat until you use all the colors you want.

6. Use a spoon to gently submerge the egg shell into the jar of colored, hot Borax water with the inside of egg shell facing up. The water must be hot for the egg to crystallize.

7. Do not move the container! Let it sit and settle overnight or even two. When you see enough crystal growth, remove egg from mixture and allow it to dry on a paper towel.

Why did crystals form on the egg?

You made a saturated solution when you mixed more powder than the liquid could actually hold. But when the water was hot, its molecules were moving apart which allowed the Borax powder to dissolve. But as the mixture cooled down, the molecules moved back together forcing the particles from the Borax to settle on the eggshell and form into crystals. When one crystal formed, more of the settling solution bonded to it to form even larger crystals.



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