

REPURPOSE FOOD WASTE - How to Make Geodes (Crystal Rocks) Using Eggshells

Source: www.education.com, 2019 (<https://www.education.com/download-pdf/activity/106460/>)

Is your little scientist up for an exciting challenge? Let them make their own geodes! Geodes are rocks with a crystal center that you and your child can make right at home by using simple kitchen materials.

What You Need:

- Eggs
- Glass
- Measuring cup
- Epsom salts
- Spoon
- Egg carton



What You Do:

1. Crack open the egg and remove the egg from shell. You'll need to also take out the inner membrane so that mold doesn't develop.
2. Run very hot water into the shell. Let it sit. Now, roll the membrane out with your fingertips.
3. Place eggshell in egg carton and allow to dry.
4. Put $\frac{1}{4}$ cup water in measuring cup and microwave it until the water is very hot, but not boiling.
5. Add $\frac{1}{4}$ cup of Epsom salts and stir. If all of the salt dissolves, add more and stir. Stop when no more salt dissolves – at this point your solution is super-saturated.
6. Carefully pour hot water into eggshell. Do not pour undissolved salts into shell.
7. Refrigerate. As water cools and evaporates, the salts will settle, and crystals will form. Allow water to sit at least overnight. Being careful not to dump out the crystals, pour excess water out of eggshell.
8. Take out your new geode and put it on display!

If you want to create several geodes at once, let the crystals form for different lengths of time – emptying one shell at 12 hours, the next at one day, etc. You might even want to use different crystal solutions (borax, sugar, salt or baking soda) for a fun and scientific comparison.