



2020 Cub Scout Backyard Challenge



Grow Salt Crystals

Category: STEM

Difficulty: Advanced

Description:

Growing salt crystals is a popular experiment for adults and children. This project will teach you how crystals grow from a liquid solution and uses simple, household items. Salt crystals begin to grow within a few hours and will become larger overnight.

You will Need:

1. Glass Jar
2. Glass measuring cup
3. Equal parts water and table salt
4. Cotton string
5. Scissors
6. Pencil
7. Tape

Fray the edges of the cotton string using the blade of the scissors then tie one end of the string to a pencil. The salt crystals will begin to grow on a rough surface more easily than on a smooth string.

Heat one to two cups of water in a glass measuring cup in a microwave for 2-4 minutes until the water begins to boil. You may need to adjust the time based on the power of your microwave. If you do not have a microwave, you can heat the water in a saucepan on the stove. Carefully transfer the

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boiling water onto your clean glass jar.

Pour the table salt into the glass jar while you stir constantly. Add the salt slowly to allow sufficient time for it to dissolve into the water. You will add approximately the same amount of salt as water in the jar in order to saturate the solution. For example, if you boiled two cups of water you will add two cups of salt. You can adjust the amount of salt if necessary. It is important to keep adding salt until no more crystals will dissolve. Once you see salt settling to the bottom of the jar then the solution is fully saturated, and no more salt will dissolve.

Place the string in the jar so that it hangs in the center and does not touch the glass. If necessary, roll the pencil to shorten the length of the string. If the string touches the glass, the crystals will glue the string to the glass and you will not be able to remove the string to observe the crystals without dissolving the salt. Tape the string and pencil in place if necessary. Do not cover the jar to allow the water can evaporate.

Sit the jar on your counter overnight to allow time for the crystals to grow. While small crystals will grow within a few hours, large crystals will take longer.

This gets better as the water evaporates over a few weeks... enjoy...



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