



## CHEMISTRY ROCKS

Explore solutions and crystals while making your own rock candy!

### Materials

- Saucepan
- Stirring spoon
- Plate
- 1 cup Water
- 3 cups + 2 teaspoons Sugar
- Heat-proof glass jar
- Wooden Chop stick or butcher's twine
- Pencil (if using butcher's twine)
- Clothes pin (if using chop stick)
- Food coloring (Optional)

### Procedure

**\*\*Only adults should use the stove and handle hot mixtures\*\***

- Bring water to a boil over medium-high heat in the saucepan and pour in the three cups of sugar.
- Stir continuously until the sugar is completely dissolved and the solution is clear. If desired, add a couple of drops of food coloring of your choice.
- Remove the pan from the heat and allow it to cool.
- Wash the jar out with HOT water and dry it completely.
- If you are using butcher's twine, cut a length that can be tied around a pencil with plenty left to hang down into your jar.
- Dip the twine or chopstick into the cooling sugar mixture, then roll it on a plate with the two teaspoons of sugar.
- When the mixture is cool enough to handle, pour it into your jar and suspend the chopstick or twine in the mixture using the clothes pin or pencil.
- Let the mixture cool undisturbed for several days at room temperature. You can cover it with a coffee filter or paper towel. Allow several days for the crystals to grow to the desired size.

### Results

You grew crystals from a solution!

### Why?

A solution is a mixture where one material is dissolved in another. If you have ever made sweet tea, you may have noticed that you can only stir so much sugar into your tea before no more will dissolve. In this exercise, to add more sugar than normally possible, you heated the solution! Once the solution cooled it was no longer able to hold onto the extra dissolved sugar and it began to precipitate out of the solution (grow crystals). In Geology, some crystals (like the ones in geodes) can form by precipitation.

To learn more about mixtures in chemistry, check out the Pink Palace Museum's *Gum & Chocolate Activity at Home*. To see more crystals, check out the Pink Palace Museum's *Geology Permanent Exhibit*.