Author: Maple Ridge MuseumSubjects and Grade Level: Science (Gr.3)Objectives: Foster a better understanding of physical changes.

Materials: 2 cups of water, 4 cups of granulated sugar, 1/2 to 1 teaspoon flavouring extract or oil (optional),2 drops food colouring, Glass Jar(s), String, a pencil,Paper Clips

For detailed instructions: https://www.thespruceeats.c om/rock-candy-521016

ESSON PLAN: ROCK CANDY

Additional Notes: The process of making rock candy takes about 1-2 weeks so you may want to have one that is already done.

POSSIBLE OPENING QUESTIONS:

Have you ever had rock candy? How does it differ from other candy? How do you think those crystals are formed?

PROCEDURE/STEPS:

- 1. Open with a discussion about how rock candy differs from other candy and some of the reasons why that is.
- 2. Make rock candy and explain what is happening. Including: Sugar dissolving in water due to heat, why rolling the string in sugar helps to speed up the process of crystallisation (gives the crystals something to cling to), why you have to put so much sugar in the water.
- 3. Finish with a closing discussion (and allow the children to eat the candy).

DISCUSSION AND REVIEW:

Discussion question ideas: How do you think the crystals were formed? What do you think would happen if there was less sugar in the mixture? What about if there was more?

ASSESSMENT:

ENRICHMENT:



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BACKGROUND INFORMATION:

- Rock candy is formed because the mixture you make is what is called "super saturated" this means that there are more sugar particles in the solution than the liquid can hold. As the solution cools, these particles fall out of the solution. These particles that fall out of the solution then connect with other sugar particles.
- The reason that "seed crystals" are used (this is the sugar that you coated the string in), is because it provides somewhere for the growing crystals to attach themselves to.
- Another byproduct of this process of cooling and separation is evaporation. That is, a small percentage of the water in the solution will evaporate into gas or vapour.

