Objective

By the end of this lesson, you will be able to grow your own rock candy and understand the science behind it.

Materials and Prep

- Glass jar or container
- Cotton string or wooden stick
- Clothespin or clip
- Water
- Granulated sugar
- Food coloring (optional)
- Pencil or pen
- Paper
- Measuring cup
- Plate or tray

Prior to the lesson, make sure you have all the materials ready and gather them in one place.

Activities

1. Start by discussing the concept of crystallization with the student. Explain how sugar crystals form and grow over time.
2. Show the student how to create a supersaturated sugar solution by dissolving sugar in water. Demonstrate the proper ratio of sugar to water and discuss the importance of stirring to dissolve the sugar completely.
3. Once the solution is ready, add a few drops of food coloring if desired and mix well.
4. Attach the cotton string or wooden stick to the clothespin or clip, making sure it is long enough to hang into the jar without touching the sides or bottom.
5. Dip the string or stick into the sugar solution, making sure it gets fully soaked. Remove any excess solution by gently tapping it against the jar.
6. Place the string or stick in the jar, making sure it hangs freely without touching the sides or bottom.
7. Set the jar in a safe place where it won't be disturbed. Leave it undisturbed for several days or until the rock candy has grown to the desired size.
8. Observe and document the growth of the rock candy each day. Measure and record its size, shape, and any other changes you notice.
9. Once the rock candy has reached the desired size, carefully remove it from the jar and let it dry on a plate or tray.
10. Finally, enjoy your homemade rock candy by tasting and sharing it with others!

Fifth Grade Talking Points

- "Crystallization is the process in which atoms or molecules arrange themselves in a repeating pattern to form crystals."
- "Supersaturated solution is a solution that contains more dissolved solute than it can normally hold at a given temperature."
- "Sugar crystals form when the supersaturated sugar solution cools down and the sugar

molecules come together to form solid crystals."
- "The shape and size of the rock candy crystals depend on factors such as temperature, sugar concentration, and the presence of impurities."
- "By observing and documenting the growth of the rock candy, we can learn more about the process of crystallization and how different factors affect crystal formation."