

Broken Glass Candy Lab

Purpose	To demonstrate a supersaturated solution and use of a candy thermometer.	
Scientific Explanation	Corn syrup is used with granulated sugar (sucrose) to prevent sugar crystals from forming.	
Supplies	Equipment	
2 c. granulated sugar	Heavy 2 qt. saucepan	
3/4 c. white corn syrup	Measuring Utensils	
1 c. water	Wooden spoon	
Pure extract-orange, cinnamon, etc.	Candy thermometer	
Food coloring	Sided cookie sheet or jelly roll pan	
2-3 Tbsp. Powdered sugar	Dust cookie sheet with powdered sugar.	
Procedure Steps		
<p>1. In a heavy saucepan, combine granulated sugar, corn syrup, and water. Stir with wooden spoon until sugar is dissolved. Sugar crystal will not show on spoon. Remove spoon and attach candy thermometer to side of pan with metal clip making sure thermometer end does NOT touch bottom of pan.</p>		
<p>2. Cook over med-high heat (HIGH for smooth top stoves) until solution reaches 300 degree F. record temperature on data chart. Meanwhile, dust jelly roll pan with powdered sugar.</p>		
<p>3. Immediately remove pan from heat when thermometer reaches 300 degrees F. (hard crack stage)</p>		
<p>4. Stir in extract with wooden spoon. Mixture will crack when extract is added. Stir until slightly thickened. Beat in a few drops of food coloring. Pour into prepared pan. Allow to set undisturbed until set. Crack by bumping on countertop. Divide pieces among lab partners.</p>		

Complete data table recording temperature after sugar is dissolved until 300 degrees is reached.

Data Table

Time	Temperature
Start time _____	
5 mins.	
10 mins.	
Ending time _____	