



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Shannon R. Woodside	Project Number J2021
Project Title Sugar Affects Homemade Marshmallows	
Objectives/Goals In my hypothesis, I believe if I use different types of sugar in a marshmallow recipe then the melting, cutting and density tests will have different results because of the sugar composition. The types of sugars were C&H Granulated sugar, C&H Powdered sugar, C&H Light Brown sugar, C&H Washed Raw sugar, C&H Baker's sugar, C&H Superfine sugar, and Sunny Select Sucralose sugar.	
Abstract Methods/Materials My marshmallow recipe contained 3 steps: "blooming" the gelatin, making the sugar syrup, and combining the two mixtures together. Then the mixture was mixed for ten minutes. It was poured in a container and was untouched for four hours. For the melting test, an 8 gram marshmallow was put in two cups of boiling water(100 C). For the cutting test, an 1 inch marshmallow was cut at the edge of a cheese slicer with quarters. For the density test, a square marshmallow was weighed and volume measured.	
Results My three tests gave different results 1. The melting test showed that C&H Powdered sugar took 1.30 minutes to melt while C&H Superfine sugar took almost twice the amount at 3.00 minutes. 2. The cutting test showed that C&H Granulated sugar took the least amount of quarters to cut at 3 and C&H Powdered sugar took the most at 30. 3. The density test showed that C&H Granulated sugar was the most dense at 0.48 grams per cubic centimeters and C&H Baker's sugar was the least dense at 0.18 grams per cubic centimeters.	
Conclusions/Discussion After testing each of the seven sugars three times (21 batches), I realized that the composition of each sugar effected the melting, cutting, and density of the marshmallow.	
Summary Statement The purpose of my project was to find how different sugars effected my marshmallow recipe.	
Help Received Parents helped proofread my writing, helped with my tests, and display board.	