



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Madeline T. Fortner</b>	<b>Project Number</b> <b>S0505</b>
<b>Project Title</b> <b>Flour Power! The Effect Flour Has on the Density of Angel Food Cake</b>	
<b>Abstract</b> <b>Objectives/Goals</b> This projects goal was to determine if different types of flour used in an angel food cake would affect the density. I believe that cake flour will produce the least dense cake because it has the lowest level of gluten protein. <b>Methods/Materials</b> Four different types of four were used to bake angel food cakes. Traditional cake four was used according to the recipe, and then was substituted by all-purpose whole wheat and spelt flour. Each cake was baked under the same conditions, using the same ingredients other than flour. Three cakes were baked per flour type. <b>Results</b> Cake four with the least amount of gluten proteins produced a significantly less dense cake than the others. Whole wheat flour with twice as much gluten protein as cake flour was the densest. <b>Conclusions/Discussion</b> My conclusion is that the less amount of gluten protein present in the flour the lower the angel food cakes density will be. This supports my hypothesis and proves cake flour makes the lightest angel food cake.	
<b>Summary Statement</b> My project is about how different types of flour affect the density of an angel food cake.	
<b>Help Received</b> Mother helped shop for supplies; Dr. Jang (teacher) gave feedback; Mrs. Treager acted as project consultant	