



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Lynsey R. Gookin	Project Number 33372
Project Title The Effects Different Leavening Agents Have on Baking Cupcakes	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project was to determine if baking soda, baking powder or yeast is the best leavening agent when baking cupcakes. I believe that the cupcakes with baking powder as a leavening agent will produce the best results.</p> <p>Methods/Materials I baked eighty cupcakes following the exact same recipe with the only variable being the leavening agent. I started with a control batch of twenty cupcakes containing no leavening agent. The remaining batches of twenty cupcakes each contained either baking soda, baking powder, or yeast. I further broke down each of the four batches of twenty into two batches, varying only the measured amount of batter into each tin. I then measured the height and diameter of each cupcake to compare the averages to one another. I then recorded my results and came up with my conclusion.</p> <p>Results Baking soda produces the best results, with each cupcake having a consistently greater average height and diameter per cupcake, thus disproving my hypothesis. Yeast was the least effective leavening agent, with each cupcake having height and diameter averages close to that of the control batches.</p> <p>Conclusions/Discussion Although baking soda is not the single most called for leavening agent in cupcakes, it produced the best results in my experiment, in spite of my hypothesis. When baking cupcakes, many recipes may require the use of one or more leavening agent such as baking powder and baking soda. In my research of cake recipes, I found that most called for baking powder. Most recipes probably call for baking powder because it must affect the taste of the product. That is why I thought that baking powder must be the best leavening agent for cupcakes.</p>	
Summary Statement The proper use of leavening agents produces a more desirable taste and texture when baking cupcakes.	
Help Received Mother helped me bake the cupcakes and assemble my display.	