



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2018 PROJECT SUMMARY**

<b>Name(s)</b> Margaret J. Spencer	<b>Project Number</b>  38512
<b>Project Title</b> Baking Soda vs. Baking Powder	
<b>Abstract</b> <b>Objectives/Goals</b> The goal of this project was to prove scientifically which leavener should be used in baking projects for best results. Baking soda and baking powder make baked goods rise due to their reactions and the ingredients within them. Baking soda (sodium bicarbonate) needs an acid to react and produce carbon dioxide so the baked good can rise. Baking powder contains sodium bicarbonate, but it also has a powdered acid (usually cream of tartar) and dry starch. <b>Methods/Materials</b> For this project I made standard blueberry muffins with baking soda and baking powder. I used standard baking equipment to make the muffins and a digital scale to divide the batter in to four groups: baking soda only, baking powder only, both leaveners and a control group with neither. All four batches were baked together in each trial. <b>Results</b> The result of my testing was that baking soda provides a slightly better rise, but without the help of a flavored acid it gives off a bitter taste. <b>Conclusions/Discussion</b> For a properly risen, neutral tasting treat no matter what the ingredients are, baking powder is the most reliable choice. The study could be improved if I had a more scientific method than my skewer method. I would like to run the experiments again with another baked good.	
<b>Summary Statement</b> For the most effective results, the majority of recipes use both leaveners: Baking soda for height and baking powder for taste, to produce an airy, risen baked good.	
<b>Help Received</b> None	