



# CALIFORNIA STATE SCIENCE FAIR 2016 PROJECT SUMMARY

<b>Name(s)</b> <b>Julia M. Abele</b>	<b>Project Number</b>  36161
<b>Project Title</b> <b>Batter Up! How Does the Amount of Time Blending the Batter and the Amount of Time Letting It Sit Impact Pancake Height?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> I conducted this experiment to see if I could make pancakes rise higher based on how long I blend the batter and how long I wait before cooking the pancakes. <b>Methods/Materials</b> I used the ingredients for Bisquick pancakes. For my first batch (my control), I blended the batter 1 minute and cooked it immediately. I blended the second and third batches of pancakes 3 and 5 minutes, respectively, and cooked them immediately. Blending for 1 minute resulted in the fluffiest pancakes. So, for the fourth and fifth batches, I blended the batter for 1 minute but waited 7 and 14 minutes, respectively, before cooking the pancakes. I measured the pancake height in millimeters, recorded my data, and repeated this process three more times. <b>Results</b> The pancakes generally rose the way I expected, though a single outlier pancake rose extremely high (20 mm!). My results showed that the least amount of blending combined with the greatest waiting time before cooking resulted in the highest pancakes, with an average height of 12.6 mm. The next highest were the control pancakes (blended 1 minute and cooked immediately), with an average height of 10.3 mm. The flattest pancakes were those blended for more than a minute, with an average height of about 7.3 mm. <b>Conclusions/Discussion</b> Blending the batter for 1 minute and waiting 14 minutes before cooking resulted in the highest, fluffiest pancakes (average height of 12.6 mm). My hypothesis was correct. The next highest were the control pancakes (average height of 10.3 mm). The flattest pancakes were those blended for more than a minute (average height of about 7.3 mm). Whenever I bake in the future, I will try to remember that patience plumps the pancakes, while over-mixing flattens them.	
<b>Summary Statement</b> My project studied the role of baking soda in pancakes by measuring the impact of blending and waiting time on the height of a pancake.	
<b>Help Received</b> My science teacher, Ms. Margeson, provided helpful advice. My mom helped me cook the pancakes. I also received advice from Mrs. Hoffmann and Mrs. Benedict.	