



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Alexander W. Bissell</b>	<b>Project Number</b> <b>J0506</b>
<b>Project Title</b> <b>Coke Blast</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of my experiment was to discover if the type of soda used with Mentos would affect the height of the geyser. My hypothesis was, "I believe that the type of soda will affect the height of the geyser, and I believe that the Diet Coke will make a higher geyser because I think that there are ingredients in the diet soda that will affect the Mentos strongly that could have the potential to cause a higher geyser". <b>Methods/Materials</b> Mentos, runs of 9 types of sodas (Cherry Coke, Diet Coke, Shasta Cola, Coke Zero, Diet Dr. Pepper, Coca Cola Classic, Diet Shasta and Club Soda as a control, all in 2 liter plastic bottles of similar shapes), measuring tape, empty bottle, camera and stand, stop watch, notebook and microscope.  I controlled the variables as much as I could, with the only variable being the type of soda used in my experiment. I measured the height of each geyser and also photographed it to study later. <b>Results</b> There were a total of 18 valid geysers. The highest geyser, Diet Shasta, was 52" at its highest which was almost twice as high as Diet Coke's geyser, and 26 times higher than the lowest which was Shasta Club Soda. Therefore, because I thought that Diet Coke would be highest, my hypothesis was wrong. <b>Conclusions/Discussion</b> I think that the experiment concluded the way it did because there is something in the diet soda that makes the explosions go higher. It's probably because of the sweetener. Shasta uses Splenda and Diet Coke uses Aspartane. Coke Zero used a combination of artificial sweeteners and had a poor geyser. Companies keep the ingredients secret but I think Diet Shasta's success had something to do with Splenda as nearly all of the sodas had otherwise similar ingredients.  I would like to study nucleation and artificial sweeteners further. I'm really interested in how nucleation affects ice-cream floats.	
<b>Summary Statement</b> My project is about how the type of soda used with Mentos affects the height of the geyser.	
<b>Help Received</b> Dad took photos, and Mom bought my supplies and proofread my project. She helped me organize this application. Ms. Woolford encouraged me to have a good time. Pat Lemle taught me how to do a science fair project.	