



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

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<b>Project Title</b> Sip All Day for Tooth Decay	
<b>Objectives/Goals</b> How does the type of liquid you drink affect the amount of decay on your teeth?	
<b>Abstract</b>	
<b>Methods/Materials</b> 18 teeth were obtained from a dentist. Each of the 6 types of liquid were assigned 3 teeth. A starting mass was measured for each tooth, and it was then placed in a beaker of the assigned liquid. The mass of each tooth was measured using a digital balance and recorded.	
<b>Results</b> To analyze the data I added the total mass of the 3 teeth for each liquid. Then I figured out the total mass lost by liquid and calculated the percent mass lost by liquid. Coke was the liquid with the highest percent mass lost at 6.4%. Lemonade teeth lost 2.6% mass. Teeth in apple juice lost 2.4%. Sprite caused 1.96% loss. Black tea caused .46% loss. Teeth in water, (my control) lost the least mass with only .15% lost.	
<b>Conclusions/Discussion</b> Coke caused the most teeth enamel loss. I believe this is due to the high levels of acid in Coke. For many teeth, the mass actually went up from the day before. This was a surprise. I hypothesize it may be due to the dyes in the drinks sticking to the teeth. Some sources of error include the teeth coming to me with previous enamel decay. Also, the fine differences in mass are sometimes difficult to detect using a digital balance. This could have skewed the results slightly. The data suggest one should avoid drinking beverages with high acid content, especially sodas like Coke.	
<b>Summary Statement</b> I wanted to find out which drinks most affected the enamel of teeth by causing decay.	
<b>Help Received</b> Borrowed digital balance from Burrough's High School	