



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

<p>Your Name (List all student names if multiple authors.) Kyle R. Woods</p>	<p>Science Fair Use Only</p>
<p>Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) Which Diet or Regular Soda Has the Most Effect on Teeth and Eggshells?</p>	<p>J0323</p>
<p>Preferred Category (See page 5 for descriptions.) 3 - Biochemistry / Molecular Biology</p>	<p>Division X Junior (6-8) _ Senior (9-12)</p>
<p>Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges. Problem Statement: Which diet or regular soda has the most affect on teeth and eggshells? Hypothesis: I believe Dr. Pepper (dark soda) will effect the teeth and eggshells more than light color sodas. I believe this because the dark sodas all have phosphoric acid, which removes calcium carbonate from teeth and eggshells making them more permeable. Also why I think Dr. Pepper will have the most affect is in looking at all the sodas I believe Dr. Pepper is the darkest. Materials: 1. 21 Baby food jars; 2. 5 Regular and diet sodas (Dr. Pepper, Coca Cola, Pepsi, Mountain Dew, and 7Up); 3. 11 Extra large white eggs; 4. 21 White Labels; 5. 11 Teeth; 6. 1 Bottled water Procedure: A. Bought 5 each of diet and regular sodas. B. Bought 21 baby food jars. C. Bought bottled water. D. I put sodas in an order from darkest to lightest and cleaned the baby food jars. E. Took pictures of the teeth and eggshells for comparisons to the after pictures. I then put each soda in two separate jars for the teeth and eggshells. F. Labeled jars. G. Put the teeth and eggshells in the soda and left from Feb. 7th to Feb. 20th. H. On Feb 20th I removed teeth and eggshells from the jars then took pictures. Results: The eggshells and teeth in the sodas changed color due to loss of strength in the teeth and eggshells because they became more porous. Coca Cola had the most affect on the teeth and eggshells when I compared them to the control group. 7Up had the least affect. Conclusion: My conclusion is that Coca Cola caused the most affect on the teeth and eggshells. The soda with the least affect was 7Up. My hypothesis that Dr. Pepper would have the most affect was wrong. But, my hypothesis that the darker drinks containing phosphoric acid would be worse or have the most affect was right.</p>	
<p>Summary Statement (In one sentence, state what your project is about.) I was trying to determine if darker colored sodas would stain teeth more than lighter colored sodas. I used eggshells as a comparison because their color is more the same.</p>	
<p>Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Dr. Larry Lorenzi helped by giving me the teeth; Dad helped me on the computer; Science teacher helped by giving me guidance.</p>	