



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Tatiana C. Trejo</b>	<b>Project Number</b>  31082
<b>Project Title</b> <b>Zap! Analyzing the Effectiveness of Oil Free Acne Cleansers and the Eradication of Escherichia coli</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of my investigation was to find a store bought acne cleanser to help eliminate bacteria and acne. <b>Methods/Materials</b> For my experiment, I used E.coli, Neutrogena Oil-Free Acne Wash, Clean & Clear Oil Free Foaming Facial Cleanser, CVS Oil Free Foaming Facial Cleanser, agar plates, filter paper, test tubes, sterile cotton swabs, distilled water, and chlorine bleach. I had my coach swab E.coli onto two agar plates and I grew them for 3 days. Next, I swabbed the grown E.coli onto 75 different agar plates and then labeled the agar plates with the cleanser's name and trial number. I then mixed water and the cleanser into a test tube and, dipped a filter paper disk into the solution and, place it onto a agar plate with the use of tweezers. I grew the plates again for three days and then I found the width of the killed bacteria by measuring the width between outside edges of the filter paper disk and the circle of killed E.coli. Lastly, I added bleach and water to a bucket and put the agar plates into the bucket and let sit. I disposed of the agar plates into a waste basket. <b>Results</b> The results of my experiment showed that the Neutrogena brand cleanser had an average of 3.232 cm of eliminated bacteria while the Clean & Clear had an average of 2.624 cm of bacteria eradicated. Lastly, the CVS brand cleanser had an overall average of 2.204 cm of killed bacteria. <b>Conclusions/Discussion</b> From my experiment, i learned that the Neutrogena and Clean & Clear brand can be very effective in eradicating E.coli. The CVS brand, though much less expensive is not as effective and is a generic store brand.	
<b>Summary Statement</b> I chose to do this experimentation because I wanted to find an effective way to help clear acne.	
<b>Help Received</b> Nathan Whittington, a science teacher at the nearby high school, provided the Escherichia coli. Mother and father, helped with the layout and assembly of my board. Carrie Given and Jewelry Lopez-Lickey, science teachers, helped me with my procedure.	