



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) <p align="center">Isaac A. Felix</p>	Project Number <p align="right">31227</p>
Project Title <p align="center">Green Cleans</p>	
<p align="center">Abstract</p> <p>Objectives/Goals Does environmental soap have a harmful effect on brine shrimp? Regular soap will have a more harmful effect on the brine shrimp compared to the ecological brands. First, I prepared a spring water and non-iodized salt solution. Then I added a half-teaspoon of brine shrimp eggs to the salt water and let them hatch for 24 hours. After they hatched, I placed 3mL of brine shrimp in 5 different Petri dishes. Then, I added the solutions to the brine shrimp. Then I let them sit in a table for 48 hours. After 48 hours, I recorded my data. After analyzing my data, it turned out that the regular and one of the environmental soaps actually killed the brine shrimp. The other environmental brand didn't affect the shrimp. My results partially supported my hypothesis; it turned out that Simple Green# actually killed the brine shrimp. If I were to repeat my experiment I would test detergents and shampoos.</p> <p>Methods/Materials Petri dishes (15), 1 pipette (10 mL), magnifying lens. Regular dish soaps: Palmolive (green one) = Brand S-P, Pine Sol = Brand P. Eco friendly dish soaps: Seventh Generation = Brand G, Simple green = Brand S. Brine shrimp (20-30 oz. or a bag), Beaker (500-1000mL), Non-Iodized Salt, Spring mountain water, Bubbler, Lamp, Regular tap water.</p> <p>Results My results partially supported my hypothesis. I hypothesized that the normal brands would impact the shrimp. This part of my hypothesis was true, for the average number of shrimp dead for the regular brands were: Palm Olive# 64 and Pine-Sol# 59. But, Simple Green# turns out to kill an average of 62 shrimp. On the other hand, 7th Generation# only killed 2 shrimp and in the control brand only 1 shrimp died. I think my hypothesis came out partially right because I assumed that the environmental brands were eco-friendly.</p> <p>Conclusions/Discussion In conclusion, my results partially supported my hypothesis. I hypothesized that the normal brands would impact the shrimp. This part of my hypothesis was true, for the average number of shrimp dead for the regular brands were: Palm Olive# 64 and Pine-Sol# 59. But, Simple Green# turns out to kill an average of 62 shrimp. On the other hand, 7th Generation# only killed 2 shrimp and in the control brand only 1 shrimp died. I think my hypothesis came out partially right because I assumed that the environmental brands were</p>	
Summary Statement <p>My project is about the secondary effects that soaps have on the oceans.</p>	
Help Received <p>Ms. Arstill helped me receive my materials.</p>	