



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Taylor A. Martinez	Project Number J0522
Project Title Investigating the Effect of Water Variances on Soap	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project is to determine which water type will dissolve bar soap at the fastest rate.</p> <p>Methods/Materials Four plastic containers were set-up and labeled for specific water types. Water types: room temperature (64 degrees), warm water (80 degrees), ice water (42 degrees), and salt water. One bar of Irish Spring soap was placed into each container. Two cups of the specified water type was poured into the container. Water types were monitored every one-half hour to maintain water variable. Soap weight was recorded at the end of a 3-hour trial period.</p> <p>Results The results of my investigation on the effects of water variances on soap indicated that soap dissolves at different rates depending on water type. Warm water (80 degrees) dissolved the soap at the fastest rate = approximately 22% in 3 hours. Salt water dissolved the soap at the slowest rate = approximately 6% in 3 hours.</p> <p>Conclusions/Discussion I found that my hypothesis was incorrect. My hypothesis stated that salt water would dissolve bar soap at the fastest rate and that ice water would dissolve bar soap at the slowest rate. My investigation determined that warm water dissolved at the fastest rate and salt water at the slowest rate. Based on my results, it appears that because both salt and soap are soluble in water and built somewhat alike the amount of salt already in the water inhibited the solubility of the soap.</p>	
Summary Statement Different water variances do have an effect on the dissolution rate of bar soap.	
Help Received Mother helped glue letters on board.	