



**CALIFORNIA STATE SCIENCE FAIR  
2004 PROJECT SUMMARY**

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<b>Project Title</b> <b>Sunblocked?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this project was to see which sunblock would withstand various temperatures and water at various temperatures the best without losing effectiveness. The data gathered also showed whether there was an effect when sunblock was exposed to temperature and water. <b>Methods/Materials</b> During this project, the sunblock brands, "Water Babies", "Shade", "Banana Boat", and "Neutrogena" were submitted to different tests using a UV card to measure UV strength. These sunblock brands were exposed to 12 different conditions each for a total of 5 trials. The different conditions were made up of combinations of three sunblock temperatures and three water temperatures. These mixtures of sunblock and water were wiped on a transparent overhead projector sheet, then placed on top of the UV card and exposed to the sun. The results for each day were recorded. <b>Results</b> When comparing all sunblock brands, "Neutrogena" worked the best with an average UV blockage rating of 4.18 out of a possible 5. Following it was "Shade" with an average of 3.98 followed by "Banana Boat" with an average of 3.82. Last but not least was "Water Babies" with an average of 3.75. <b>Conclusions/Discussion</b> The results show that any sunblock in any condition is better than no sunblock. They show that "Neutrogena" is the best followed by "Shade" then "Banana Boat" and last "Water Babies". The results also show that hot temperature, wether it is on the actual sunblock or on water exposed to it, affects the sunblocks effectiveness. All variables either helped or affected the sunblock's effectiveness but in an insignificant amount except warm temperature.	
<b>Summary Statement</b> Which sunblock brand will withstand different temperatures as well as water at different temperatures without losing its effectiveness?	
<b>Help Received</b> Mom and dad for all support and help; Dr. Peter Paul Rullan for interview and information; Mr. and Mrs. Levy for helping gather materials; Sandy Goldstein for helping decorate board; Ms. Reynolds and Ms. Young {teachers} for everything.	