



CALIFORNIA STATE SCIENCE FAIR 2014 PROJECT SUMMARY

Name(s) Elizabeth Gonzalez	Project Number J2010
Project Title Sunscreen Effectiveness against Ultraviolet Radiation	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to figure out what sunscreen product is more effective in blocking ultraviolet radiation, which can cause skin cancer if not properly protected.</p> <p>Methods/Materials Four different brands of sun screen lotion with the same SPF rating of 30 were utilized (Aveeno, Banana Boat, Coppertone, and Neutrogena). To assist with the procedure the following materials were used: UV meter, plastic wrap, graduated cylinder, latex gloves and a nice clear sunny day. A total of 60 trials were conducted, twelve trials for each brand of sunscreen. Utilizing the plastic wrap as the control of the experiment, the percent difference in how much ultraviolet radiation was repelled with each sunscreen brand was calculated.</p> <p>Results The majority of the trials performed on Banana Boat proved to block the largest amounts of ultraviolet radiation. Banana Boat was 51% better in blocking the ultraviolet radiation than the plastic wrap alone. Aveeno was 45% better in blocking the ultraviolet radiation than the plastic wrap alone, Coppertone was 41%, and Neutrogena was 29%.</p> <p>The wavelength results concluded that Banana Boat was the best sunscreen in blocking ultraviolet radiation out of the four different brands. Banana Boat had an average wavelength of 416.75, Aveeno had an average wavelength of 460.17, Coppertone had an average wavelength of 500, and Neutrogena had an average wavelength of 601.17. The lower the number of the wavelength, the better the sunscreen brand was able to block the ultraviolet radiation.</p> <p>Conclusions/Discussion Although the hypothesis of the experiment was that Aveeno would have been the best sunscreen in blocking ultraviolet radiation, the experiment results did not support the hypothesis. Instead, Banana Boat proved to be the most effective in blocking ultraviolet radiation. This project helped me become more knowledgeable on ultraviolet radiation, how it impacts the skin, and the importance of protecting the skin with an effective sunscreen lotion.</p>	
Summary Statement To identify which sunscreen brand is most effective in protecting against ultraviolet radiation.	
Help Received Used UV meter from school and received guidance from my science teacher	