



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Christy H. Park	Project Number J2221
Project Title What You Should Know about Sunscreen	
Abstract	
Objectives/Goals My objective is to find out which sunscreen brand blocks the most UV rays. The objective for the second part of my experiment is to find out how much of a variation there is between different SPF's of sunscreen.	
Methods/Materials Materials: saran wrap; 4 UV ray detectors; 6 different brands of sunscreen [Aveeno, Neutrogena, Bull Frog, CVS Brand, Banana Boat, and Coppertone]; 6 Neutrogena sunscreens with the SPF's 15, 30, 45, 70, 85, and 100; tanning salon [so that the number of rays stays consistent]. Procedure: Experiment 1- 1. Place saran wrap over UV ray detector. 2. Place UV ray detector in tanning bed. Record the number of UV rays being emitted. Use this number as the base line. 3. Place one fingertip of sunscreen Brand A over the saran wrap where the sensor is on the UV ray detector. 4. Place the UV ray detector in tanning bed and record the UV rays being detected immediately, after 10 minutes, after 20 minutes, and after 30 minutes. 5. Repeat steps 3-5 for different brands of sunscreen. Experiment 2- 1. Place saran wrap over UV ray detector. [assuming you already have the baseline.] 2. Place one fingertip of sunscreen SPF A over the saran wrap where the sensor is on the UV ray detector. 3. Record the number of UV rays being detected. 4. Repeat steps 1-3 for the rest of the SPF's.	
Results Bull Frog blocked all of the UV rays being emitted from the tanning bed (25+ rays). Neutrogena and Aveeno blocked the second most. CVS brand blocked the least. For the 2nd part of the experiment, there is a big jump in the amount of protection between SPF 30 and SPF 45. SPF 45 and above blocked significantly more rays than SPF 30 and below.	
Conclusions/Discussion Every brand of sunscreen blocked at least 10 UV rays, and my experiment definitely shows that no matter which brand you use, it will still be effective and will block UV rays. Bull Frog, Neutrogena, and Aveeno blocked the most UV rays overall. CVS Brand blocked the least and I thought this was interesting because generic brands always say that they work just as well as brand-names, for a lower price. However, my	
Summary Statement My project tests which sunscreen brand blocks the most UV rays and how much of a variation there is between different SPF's.	
Help Received Dad drove me to and from tanning salon; Mom helped with my board; Science teacher helped me make tables on Microsoft Excel.	