CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
Katherine E. Paladichuk

Project Number
31734

Project Title
Brand Name Sunscreen: Are You Getting Burned?

Abstract

Objectives/Goals
The objective is to determine if different brands of sunblock with the same SPF number block the same amount of UV light.

Methods/Materials
Different brands of sunscreen were applied to a clear, plastic page protector. An acrylic sheet was placed on top of the drops, to form an even, thin layer of sunscreen. UV-sensitive Sun Art paper was placed underneath the page protector and exposed to the sun. After exposure, the color intensity on the Sun Art paper was measured by scanning the Sun Art paper and analyzing it using the Photoshop Elements 3.0 computer program.

Results
SPF 30 Banana Boat and SPF 30 Banana Boat Kids were more effective than SPF 30 Trader Joe's in 8 out of 9 comparisons or trials. SPF 30 Banana Boat was more effective than SPF 30 Target in 2 out of 3 comparisons. SPF 50 Banana Boat and SPF 50 Banana Boat Kids were more effective than SPF 50 Coppertone in 5 out of 6 comparisons. SPF 50 Banana Boat and SPF 50 Banana Boat Kids were more effective than SPF 50 Target in 2 out of 3 comparisons. Surprisingly, the effectiveness of SPF 50 Coppertone was consistently lower than two of the SPF 30 samples.

Conclusions/Discussion
Different brands of sunblock with the same SPF number did not block the same amount of UV light. Some of the sunscreens with high SPF were not as effective as those with lower SPF.

Summary Statement
UV-sensitive paper is used to compare the effectiveness of different brands of sunscreen.

Help Received
Mother supplied materials; Neighbors supplied sunscreen samples; Father taught me how to use Photoshop Elements Program