



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Christine N. Smith</b>	<b>Project Number</b> <b>J1129</b>
<b>Project Title</b> <b>How Do Sunblocks and Sunscreens Compare?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of my project is to determine if sunblocks are more effective than sunscreens in blocking ultraviolet rays in sunlight. I believe that the three brands of sunblock will block more UVA and UVB rays than the three brands of sunscreen.</p> <p><b>Methods/Materials</b> Samples of three brands of sunblock and three brands of sunscreen were weighed and each spread over a separate 5 cm X 5 cm area on a clear plastic folder. Printing-out paper (photosensitive paper) was inserted in the plastic folder and it was placed in the sun for five minutes. The exposed printing-out paper was rinsed, then submerged in Kodak Fixer. This process was repeated for four trials. The developed paper was compared to a gradation scale.</p> <p><b>Results</b> The sunblocks were more effective than the sunscreens when they both had the same Sun Protection Factor (SPF) number.</p> <p><b>Conclusions/Discussion</b> My conclusion is that sunblock ingredients do block out more ultraviolet rays than sunscreens. Sun Protection Factor (SPF) number is a reliable indicator of the effectiveness of sunscreens, but it is not a reliable indicator of the effectiveness of sunblocks.</p>	
<b>Summary Statement</b> I compared sunblocks to sunscreens using photosensitive paper to determine which was more effective when exposed to UVA and UVB rays in sunlight.	
<b>Help Received</b> My father helped type some of the report.	