



**CALIFORNIA SCIENCE & ENGINEERING FAIR  
2019 PROJECT SUMMARY**

<b>Name(s)</b> <b>Sadie Henry</b>	<b>Project Number</b> <b>J1909</b>
<b>Project Title</b> <b>Skin Care Moisturizers for Swimmers</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> The objective of this project is to determine which skin product provides the most hydration when applied to chlorinated skin.</p> <p><b>Methods</b> Four moisturizers (shea butter, glycerin, coco butter and aloe), digital moisturizer monitor, pig skin, chlorine water and liquid droppers. Pig skin is soaked in chlorinated water, then each moisturizer is applied onto pig skin and after 2 hours the hydration level of the skin is measured using a moisturizer monitor.</p> <p><b>Results</b> After 40 individual trials of each moisturizer, results showed that glycerin had the highest hydration level with 40.8% and aloe had the least with 10.85%; coco butter and shea butter had similar hydration levels with 20.46% and 18.68% respectively.</p> <p><b>Conclusions</b> I set out to identify which product would be most moisturizing for skin exposed to chlorine for long periods of time. My hypothesis was that shea butter would be the most moisturizing because it had the highest concentration of oil; however, glycerin was the most moisturizing product.</p>	
<b>Summary Statement</b> Based on the results of this experiment swimmers should use glycerin-based moisturizers to keep their skin most hydrated.	
<b>Help Received</b> I designed and performed the experiment on my own. My science teacher, Ms. Blickenstaff supported and guided me through the process and helped prepare me for GSDSEF.	