



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Toni Schollum; Emily Thomas</b>	<b>Project Number</b> <b>J2126</b>
<b>Project Title</b> <b>Soaking Up Oil: How Effective Are Hair and Fur Booms?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> In May 2010 Central Valley hair salons and pet groomers tried to help with the Gulf of Mexico Oil Spill by saving hair clippings that were stuffed into nylon tights by volunteers to make sausage shaped booms to string out along beaches and collect the oil. BP decided they would not use the hair booms, and discouraged people from collecting and donating hair. We decided to do a comparison test of commercial booms, hair booms and fur booms. We expect hair booms and fur booms to work better than commercial booms because they do not just sit on the surface.</p> <p><b>Methods/Materials</b> Three 1ft long booms in each of the three materials; hair, fur and polypropylene were constructed. Three large storage bins were set up with 10 gallons of water and 1 quart of oil. Booms were left in the bins for 30minutes, sweeping them across the bins every 5 minutes. The oil remaining in the bin was recorded after 15minutes and 30minutes. Also, at 30 minutes the depth below water level of the lowest and highest parts of the bottom surface of the boom was recorded.</p> <p><b>Results</b> On average one foot long polypropylene booms, hair booms, and fur booms soaked up 73%, 86%, and 93% of 4 cups of used motor oil. There did not seem to be a problem with the fur booms sinking, but in 30minutes the hair booms were just below water level.</p> <p><b>Conclusions/Discussion</b> As expected the hair booms and fur booms worked better than commercial booms. There didn't seem to be a problem with the fur booms sinking, but in 30minutes the hair booms were just below water level.</p>	
<b>Summary Statement</b> How effective are hair and fur booms for soaking up oil?	
<b>Help Received</b> Mother collected waste oil for us, and helped us use Excel to plot our data.	