



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Emily K. Denny	Project Number J1104
Project Title The Distribution of Oil over Water in Different Wind Conditions	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project is to determine if the speed of wind: high speed, low speed, or no wind, affects how oil disperses through water.</p> <p>Methods/Materials A 20" wide x 39" Tupperware container was marked every 10cm on all four sides. String was attached to form a grid. The horizontal sides were marked A-E and the vertical sides were marked 1-9. The container was filled up to 1/2" below the top. A fan was placed 30cm from the horizontal side and set to either high speed wind, low speed wind, or no wind. I poured 15ml of oil through an 8-1/2" cylinder which was placed at grid C-1. The cylinder was gently removed and the timer started. I recorded which blocks in the grid contained oil every 3 minutes for 15 minutes.</p> <p>Results The experiments with high wind speed dispersed the oil quickly to to the farthest side of the container. In the low wind speed tests the oil dispersed gradually and eventually moved the oil to the farthest side of the container. The oil in the no wind tests dispersed slowly and the oil stayed in the same area where it was poured.</p> <p>Conclusions/Discussion Based on my results, I expect an oil spill in very windy conditions to spread quickly and to a greater distance from the original spill. In low wind situations, the oil would spread out slower and stay around the same area.</p>	
Summary Statement My project is to determine if varying wind speeds affected the distribution of oil on the surface of water.	
Help Received My Mom proofread my project, My Dad helped me organize my procedure, My teacher helped me stay organized	