



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Jennifer J. Hines	Project Number S0818
Project Title Oily Situation	
Objectives/Goals Oil spills are dangerous to the environment and should be taken very seriously; there are never enough solutions to cleaning up the residue. This project is an attempt to find the most efficient oil absorber out of 5 commonly known substances. The results may be useful to an environmental scientist or even an ordinary person, looking to clean up an accidental spill. If 5 different commonly used materials: sawdust, kitty litter, dirt, ventilation filters, and charcoal are tested for their ability to absorb oil from water, then the kitty litter will extract the greatest amount of oil.	
Abstract Methods/Materials Six nylons were suspended in each trial, each containing a different test material. These materials included 1 cup of kitty litter, 1 cup of sawdust, 1 cup of dirt, 4 charcoals, 3 filters, and an empty nylon (used as a control). 125 milliliters of water and 125 milliliters of vegetable oil were poured together into the nylon opening. The nylons were then tied to a chair and suspended for five minutes. Separate collecting measuring cups were placed under each of suspended nylons. After five minutes had passed, (when most of the contents stopped dripping completely), the nylon was untied and disposed of. The measuring cups were then placed on a level surface for accurate measuring. The measuring cup increments were in 50 milliliters, thus some of the initial results were rounded to the nearest 5th milliliter. There were 10 trials for each substance.	
Results Absorbents Oil H2O Sawdust 71 ml 46.5 ml Kitty litter 58.5 ml 81.5 ml Dirt 49.5 ml 59 ml Filter 43 ml 33.5 ml Charcoal 13 ml 28 ml	
Conclusions/Discussion The amount of water absorbed was not the primary objective in this experiment; however it was included in the results because the substance that absorbed the most water did not absorb the most oil. Based on the results, the highest average amount of oil absorbed was sawdust which absorbed the average of 71 milliliters out of 125 milliliters of oil. Sawdust absorbed 12.5 millimeters more than kitty litter, which had the second highest amount. For such a small amount of oil used in this experiment, this difference did appear significant. According to this experiment, sawdust would be the most efficient way of absorbing	
Summary Statement Testing the effectiveness of potential absorbents by their ability to extract lubricant from H2O	
Help Received	