



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Daniel J. Barton	Project Number J0903
Project Title Does Soil Absorb Motor Oil Spills Better than Consumer Products?	
Objectives/Goals My objective last year was to determine whether soil, sand, cat litter, or sawdust absorbed motor oil spills the best. I found that soil was the most absorbent. So my objective this year is to determine whether soil absorbs motor oil spills better than store bought consumer products that are made for that specific purpose. My hypothesis stated that the consumer products would be the most absorbent because that is their primary function	
Abstract Methods/Materials Lay out 4 pie pans;Pour 1/2c of 10w 40 motor oil into pans;Pour level 1/2c of soil, Multi Purpose Ultra Sorb, Oil Dri Concentrate or Select Sorb Auto-Spill on top of oil;Wait 24 hours;Pour contents of pan into strainer over 2c measuring beaker;Measure amount remaining;Record results;Pour oil into oil recycling container;Repeat steps 1-9 for 10 trials	
Results Soil - Least absorbent material= 32% (average) amount absorbed Ultra Sorb - Third most absorbent material= 35% (average) amount absorbed Oil Dri - Second most absorbent material= 37% (average) amount absorbed Select Sorb - Most absorbent material= 38% (average) amount absorbed	
Conclusions/Discussion My hypothesis was correct. The least absorbent material was the soil with an absorbency of 32% average. The most absorbent was the Select Sorb consumer product with an average absorbency of 38%. Another observation I made is that the consumer products are probably only used for smaller spills. In my first trial I used 1c of oil and only 1/2c of material, there was so much oil that the materials became overwhelmed that they could not absorb it, therefore I had to decrease the oil quantities to 1/2c. I learned that the Select Sorb absorbed more motor oil than the soil and other consumer products I tested. I would definitely recommend buying this product if you work at an auto repair or oil-recycling center. In conclusion people should use the Select Sorb to absorb motor oil spills instead of soil. Although last year soil was my top absorber, it didn't fare as well this year.If you're concerned about spending money though, you can still use soil. If you look at my results soil absorbed only 6% on average lower than the Select Sorb. There is really not that much difference. So, if you want to absorb motor oil spills most effectively, buy the Select Sorb product. If you want to absorb motor oil spills economically, use the soil, it works fine too. Be sure to dispose of everything properly too!	
Summary Statement Determining whether soil absorbs motor oil spills more effectively than store bought consumer products.	
Help Received Mother helped apply project to board and took photographs.	