



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Shivani Gupta	Project Number J1710
Project Title Used Motor Oil and Plants	
Abstract Objectives/Goals The objective was to determine the effect of used motor oil on bean plants by measuring plant height. The prediction was that the plants placed in the contaminated soil would be adversely affected. Methods/Materials Seeds of contender bush bean plants were sowed in pots filled with soil. Three different amounts (1%, 2% and 6% of soil volume) of used motor oil were poured on top of soil. The control was the plant cultivated in clean soil. Five replicates were created for each level of soil contamination. All plants were given same amount of water and sunlight. Plant height was measured for 15 days after sowing and average heights were compared. Results Seeds started germinating on the seventh day. Until the eighth day, the average height of the control was greater than the remaining groups of plants. After this, the plants cultivated in 1% oil contaminated soil grew better than the control. The plants placed in 6% oil contaminated soil remained shortest in height during the whole experiment. Conclusions/Discussion The prediction was partly correct. At low contamination levels, the bean plants grew better than the control while at highest level (6%), the plant growth was adversely affected. Bean plants can remove toxic chemicals in the oil from the soil under low contamination conditions through a process called phytoremediation. Phytoremediation is a viable and natural alternative for soil remediation.	
Summary Statement The effect of used motor oil on growth of bean plants.	
Help Received My father helped me handle the used motor oil.	