



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Alessandro P. Cois	Project Number J1203
Project Title Used Motor Oil Spills: Danger!	
Objectives/Goals The purpose of my experiment is to see how used motor oil affects the growth of plants. I believe the oil will prevent the plants from absorbing the water and nutrients that the plants need to grow from the soil. Also I believe that what the plant will be able to absorb will not be healthy and it will show with stunt growth and wilting of leaves. I believe that at the end of 30 days the Snapdragon in Pot D, watered with more oil, will be the group of plants to show the least growth as a reaction to the oil.	
Abstract I tested two types of plants: Fava beans and Snapdragons. I used four pots for each group of plants, labeled A, B, C, and D in each group. The Fava Beans pots had 5 plants in each pot, the Snapdragon had 4 plants in each pot. I measured each plant and recorded their height with a metric ruler at the beginning of the experiment. I watered each pot every 3 days as follows: Pots A (controls): 200ml of water; Pots B: 200ml water + 20ml of used motor oil; Pots C: 200ml of water + 40ml of oil; Pots D: 200ml of water + 60ml of oil. My constant are the water, the soil, the plants in each group; my variable is the used motor oil.	
Methods/Materials I tested two types of plants: Fava beans and Snapdragons. I used four pots for each group of plants, labeled A, B, C, and D in each group. The Fava Beans pots had 5 plants in each pot, the Snapdragon had 4 plants in each pot. I measured each plant and recorded their height with a metric ruler at the beginning of the experiment. I watered each pot every 3 days as follows: Pots A (controls): 200ml of water; Pots B: 200ml water + 20ml of used motor oil; Pots C: 200ml of water + 40ml of oil; Pots D: 200ml of water + 60ml of oil. My constant are the water, the soil, the plants in each group; my variable is the used motor oil.	
Results After 30 days I measured each plant again. I recorded each plant growth in two separate diagrams, one for the Fava Beans and one for the Snapdragons. I also calculated the average growth for each group to make it easier to see the result. My hypothesis was correct: the Snapdragon in Pot D showed the least growth and the most stress. Both Pots A plants were the tallest and healthiest ones.	
Conclusions/Discussion At the end of my experiment I cut a section of one Fava Bean stalk from Pot A and one from Pot D. The difference was clearly visible in the tissue. Also when I pulled the plants out of the soil, the Pot A plant was very difficult to pull while the one in Pot D offered no resistance at all, as if it had no roots. I hope my experiment will make people understand the importance of proper disposal of used motor oil, which is a very toxic substance.	
Summary Statement To see how used motor oil affects the growth of plants.	
Help Received Francesca Cois (mother) helped choosing the plants and materials: Sara Cois (sister) helped with the board set up: librarian helped choosing the books for the research.	