



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Primavera Leal-Martinez	Project Number 31267
Project Title Investigating the Effects of Inland Contamination Rate of Oil in Various Soil Types	
Objectives/Goals My objective was to investigate the effects of the inland contamination rate of oil in various soil types. My goal was to determine how far inland an oil spill will affect plant growth. I believe the highest harmful inland contamination rate of oil will be in the sandy soil. The least harmful inland contamination rate of oil will be in the top soil. Abstract Methods/Materials I used sponges to simulate a body of water. I placed 2 $\frac{1}{2}$ sponges in the center of 6 plastic containers. I poured 2 dry quarts of soil from 3 sample types including sand, top soil, and clay on each side of the sponges. I then planted radish seeds every two centimeters on both sides of the sponges. I poured 400 milliliters of water onto the sponges in each of the three trays. Water was my control. I poured 400 milliliters of oil/water onto the sponges in each of the 3 trays. I then covered the trays and recorded sprouts on day 2, 4, 6, and 8. Results The results of my investigation on the effects of the inland contamination rate of oil in various soil types indicate that the Sandy Soil had the least inland radish seed germination. The inland radish seed germination stayed at 0. The average number of seed germination was 0. Conclusions/Discussion After completing my investigation on the inland contamination rate of oil in various soil types, I found that my hypothesis for the highest harmful inland contamination rate of oil was correct. My hypothesis for the highest harmful inland contamination rate of oil stated that sandy soil would be the most harmful to the seed germination. The inland radish seed germination distance in centimeters with oil contamination started at 0 centimeters, and remained at 0 centimeters. The average number of sprouts that grew was 0. My hypothesis for the least harmful inland contamination rate of oil was also correct. My hypothesis stated that the least harmful rate of oil contamination to seed germination would be in the top soil. The inland radish seed germination distance in centimeters with oil contamination started at 6 centimeters and went up to 22 centimeters. The average number of sprouts that grew was 6.36.	
Summary Statement I investigated the inland contamination rate of oil in sandy, clay, and top soil and its effect on seed germination	
Help Received	