



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Janeen A. Tugas	Project Number J0820
Project Title Determining the Effectiveness of Polymers in Absorbing Hazardous Materials	
Abstract Objectives/Goals To determine if polymers are an effective way to pick-up (absorb) hazardous materials. To determine if you can clean up and dispose of hazardous materials using the polymers. Methods/Materials 3 trials were made 1,2,3. 3 groups were made A,B,C. In each group 2 tablespoons of each absorbent were put in its group(A-polymer,B-Cat Litter,C-Super Absorbent). My materials were the 3 absorbents for it's group, 350 grams of Anti-Freeze, 200 grams of sand, 1 grams scale, and 1 mesh screen. After everything was in the 9 cups, I set it out for 1 week. Then after the 1 week wait, I measured how much Anti- Freeze was absorbed with a grams scale. In group A I had to separate the polymer from each other. In groups B and C, I separated the Anti- Freeze from the absorbent with a mesh screen. Results My results showed that the polymer absorbed the most, without leaving any drops. Groups B and C had the same amount absorbed. Group A weighed 380 grams. Groups B and C only weighed 360 grams. Group A took 5 days for the Anti- Freeze to absorb it all. Groups B and C absorbed as much as it could in a little amount of time. If I had combined B and C's leftover Anti- Freeze together, it would if took 3 cups of Cat Litter and Super Absorbent to absorb it all. Conclusions/Discussion Since now i found out that polymer absorbs the best, it could help our environment. The way how we could do that is to put the polymer into a contaminated area and see if it could absorb it well. Then dispose it properly.	
Summary Statement To see how polymers can effectively pick up hazardous materials to help our environment.	
Help Received Dad supervised while I conducted experiment. Teacher helped with writing.	