



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Alisa Smith	Project Number J0532
Project Title Bleach Baby Bleach!	
Objectives/Goals My objective was to find which solution gets rid of grape juice stains the best: oxygen bleach, chlorine bleach, vinegar, or water.	
Abstract I poured a controlled amount of purple grape juice onto 15 pieces of cotton towel, let the pieces dry, soaked them in the proper amount of each solution for 30 minutes, rinsed them for 30 seconds, squeezed the water out, and let them dry. Finally, I compared the remaining stains to a special grid scaled 1 to 10 (10 being bad and 1 being good) to see what score they got. My materials were a measuring cup, measuring dropper, undiluted chlorine bleach, oxygen bleach, apple cider vinegar, water, a cotton towel, cups, wax paper, and purple grape juice.	
Methods/Materials I poured a controlled amount of purple grape juice onto 15 pieces of cotton towel, let the pieces dry, soaked them in the proper amount of each solution for 30 minutes, rinsed them for 30 seconds, squeezed the water out, and let them dry. Finally, I compared the remaining stains to a special grid scaled 1 to 10 (10 being bad and 1 being good) to see what score they got. My materials were a measuring cup, measuring dropper, undiluted chlorine bleach, oxygen bleach, apple cider vinegar, water, a cotton towel, cups, wax paper, and purple grape juice.	
Results Chlorine Bleach scored the best with an average score of 1. Oxygen Bleach came in second with an average score of 2.5. Vinegar came in third with an average score of 6. Water came in last with an average score of 7.	
Conclusions/Discussion I thought that Oxygen Bleach would do the best because it is supposed to do well with organic stains, and grape juice is organic. Instead, Oxygen Bleach came in second. Chlorine Bleach came in first-I guess that is why they use it to wash clothes. The only issue with Chlorine Bleach is that it got rid of some of the permanent marker, so unless it is diluted, it shouldn't be used with colored clothes.	
Summary Statement Out of four different solutions, I wanted to find out which one got rid of purple grape juice stains the best.	
Help Received Dad helped format report on computer, timed me, and took pictures. Mom helped me arrange display board and helped rinse.	