



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Celeste E. Wychopen	Project Number J0243
Project Title Can Young Children Open a "Child-Resistant" Bottle?	
Abstract Objectives/Goals My objective in conducting this experiment was to challenge the assumption that #child-resistant# bottles are safe. I hypothesized that #child-resistant# bottles would not be able to prevent children between the ages of three and six from opening them. I believed that some children would possess the intelligence or strength to open these bottles. Methods/Materials Two identical #child-resistant# medication bottles with common #safety# caps were obtained. The parameters for my experiment included a three-minute time limit (measured with a stopwatch) and a three to six year old age range. To motivate the students to open the bottle, I told them that there was a ticket inside which they could redeem for a prize. I explained the hazards of opening medication bottles at home. The teachers reiterated this point. To increase the size of my sample (Copperopolis School has only two kindergarten/first grade classes, both of which I tested) one of the medication bottles was given to my twenty-nine year old sister, for testing outside of Copperopolis Elementary School. My sister conducted experimentation with her pre-school students with the same parameters and data recording methods that I used with my kindergarten and first grade students. The test was carried out on a total of 61 students. Results Twenty-one of the tested students were able to open the #child-resistant# medication bottle, proving my hypothesis correct. Conclusions/Discussion I have concluded that #child-resistant# medication bottles are not able to keep children from opening them and conceivably ingesting the contents. These results bring to light the need to improve #child-resistant# bottles to prevent possibly fatal tragedies.	
Summary Statement How safe are "child-resistant" bottles.	
Help Received Parents assisted and instructed with word processing program; adult sister helped gather data	