



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Arianna E. Gomez	Project Number J1416
Project Title Whater You Drinking?	
Abstract Objectives/Goals Is it really safe to reuse a water bottle for drinking? The researcher believes that it is not safe to reuse a water bottle because of the bacteria and germ build up. The few drops of water left over from previous tests may have come in contact with the subject's mouth, which may have bacteria. The bacteria from your mouth may then multiply on the mouthpiece and water after several uses. Methods/Materials While testing, the researcher had to hand out numbered water bottles every Tuesday and Thursday for five weeks. The subjects had to return them on Wednesday's and Monday's. While with the researcher, the water bottles would be tested for bacteria using the swabbing method. The subjects would use the first water bottle for two and one half weeks and then a new one for another two and one half weeks. Results The results are (from side one: mouthpiece) that on the first test, there were no water bottles with any growth. Test 2: 4 water bottles, test 3: 8 water bottles; test 4 and 5 had twelve water bottles. Test 6 was a new water bottle and 4 water bottles had bacteria without being drunk from. Test 7: 9 water bottles, test 8: 14 water bottles, test 9: 13 water bottles, and test 10: 15 water bottles. (Side two: water) Test 1: 0 water bottles, test 2: 4 water bottles, tests 3, 4, and 5: 14 water bottles. Test 6 is a new water bottle, had 4 water bottles, test 7: 10 water bottles, test 8: 15 water bottles, test 9: 14 water bottles, and test 10: 15 water bottles. The averages of bacteria ranged from 0.05 to 10 or more. Conclusions/Discussion The conclusion to my project is that it isn't safe to reuse water bottles because even after the first time you use a water bottle, bacteria begins to grow. The most amount of times you should drink from a water bottle is once, maybe twice because even after the first time the subjects drank from the water bottles, 4 of the water bottles had bacterial growth. After to many uses, you would probably get sick because of to much exposure to the bacteria.	
Summary Statement Is it really safe to reuse a water bottle for drinking?	
Help Received Mom helped seal Petri dishes; Dad helped refill water bottles; Mrs. Avilez from San Ysidro High School showed how to make graphs; Mr. Nevarez from Otay Ranch High School helped supervise use of lab equipment and showed how to prepare agar, prepare Petri Dishes, count baceria, and he disposed of the	