



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Sarah C. Bruno	Project Number J1005
Project Title Can I Drink That Water?	
Objectives/Goals The objective was to test different methods to disinfect pond water. The goal was to make pond water safe to drink.	
Abstract Methods/Materials Methods: 1) Collect pond water. 2) Prepare incubator plates. 3) Apply four different methods (UV, boil, iodine, home-made filter) to pond water and plate samples. 4) Incubate plates and observe changes over three days including photography and colony count. Materials: 5 agar plates; 5 MacConkey agar plates; 10 cups of pond water; Ultra Violet wand; Stove; Iodine tablets; Sand; Activated Charcoal; Coffee filter; Thermometer; Incubator; Camera and readily available household supplies.	
Results The Ultra-violet and boiling method both disinfected the water. The filter did not remove E. coli bacteria. The iodine removed E. coli but not other bacteria.	
Conclusions/Discussion I was correct in hypothesizing that the homemade filter would not be very effective. However, my hypothesis about iodine was wrong. The iodine did not remove much bacteria. If I did this experiment again, I would screen out large particles prior to treatment and use more activated carbon in my filter.	
Summary Statement I wanted to find the most effective method to remove E. coli and other bacteria from pond water to make it drinkable.	
Help Received Sonora Regional Hospital Lab for donating MacConkey Plates; My family for helping me construct the board and supplying me with ideas	