



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Laura Essayah; Sydney Frazer	Project Number S0905
Project Title Bacteria, Baby!	
Abstract Objectives/Goals We wanted to determine, out of a charcoal, paper, and ceramic filter, which filter would eliminate the most bacteria. Methods/Materials The materials we used were two large beakers (one for sterilization and one for melting agar), twelve Petri dishes, one bottle of agar, one thermometer, hot mitts, two burners, twelve Ziploc bags, disinfectant spray, and safety gloves. To test each of the filters, we put drops of unfiltered and filtered water on agar gel to watch for bacteria colony growths. Results We found that no bacteria was present in the water sample we used. We then replated the water after filtration on the agar, and once again found that no bacteria grew. We then decided to look under the microscope at the particles to determine which filter worked the best, which was the paper filter. When we attend California State Science Fair, our results may vary from this because we are going to retest prior to state. Conclusions/Discussion When no bacteria grew with our unfiltered water sample, we decided to base our results on what we saw when looking through the microscope. With that said, we found that the charcoal filter filtered out the most, while the ceramic filter was average.	
Summary Statement For our project, we tested which of three filters, ceramic, charcoal, and paper, would filter out the most bacteria from a pond water sample.	
Help Received Revisions by Mr. Smith	