



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Melissa R. Fagan	Project Number J1107
Project Title Solving the Water Crisis: Creating a More Efficient Solar Still	
Abstract Objectives/Goals Goals: My Science Fair experiment was to determine if the colors of an evaporative basin influenced the effectiveness of solar evaporation distillation. If one particular color is more efficient in distilling a greater volume of pure water, then the solar evaporation distillation device should be that color. Methods/Materials Materials/Procedure: I first designed and built a solar evaporation distillation device. The evaporative basins were filled with either 500ml or 1500ml of seawater (for example, there was both a 500ml of seawater green container and a 1500ml of seawater green container). Daily, twenty trials were conducted in October. Each set of experiments had one relevant variable: the color of the evaporative basin. There were two sets of experiments # one using a basin filled with 500 ml of seawater; the other using a basin filled with 1500 ml of seawater. The basins were placed in the same location for every experiment; the seawater came from the same location for all of the experiments. Results Results: Each solar still, regardless of the color of the evaporative basin, desalinated the seawater. The yellow evaporative basin distilled the least amount of pure water in both the 500ml experiment and the 1.5L experiment. The clear evaporative basin generally distilled the most pure water. Also, the rate of evaporation was higher for the 1.5L container than for the .5L container. Conclusions/Discussion Conclusion: I found that both (a) the color of the evaporative basin and (b) the amount of seawater filling the basin affect how much condensate is collected in solar evaporation distillation.	
Summary Statement My project evaluates the impact of color and volume on the efficiency of solar desalination.	
Help Received No help.	