



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

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Project Title The Effects of Eutrophication on Pond Water	
Objectives/Goals Abstract For my project I tested how adding different contaminants to pond water affects the amount of oxygen in the water. My hypothesis was, if nutrient contaminants are added to pond water, then oxygenation will increase as plant growth increases. Methods/Materials Procedure Go to the Guajome Lake and collect 1.2 liters of pond water. Gather all materials. Add 150mL of pond water to each of the 15 mason jars. Add 15mL of fertilizer to 5 mason jars. Add 15mL of detergent to 5 mason jars. Leave 5 jars with only water. Place the jars in the sun. Leave them there for 7 days. Take photos and write observations daily. Results During the first trial, the jars with no added chemicals remained around the same while the jars with fertilizer and detergent added to them had a decreased amount of oxygen over time. The jars with fertilizer had the most drastic change during this trial. All of the jars started day 1 with about .8 or .7ppm in those jars, the lowest ppm that was reached during this trial was by detergent 3, fertilizer 1, and fertilizer 5, who all reached .3ppm by the seventh day. During the second trial my results remained very similar to the results of the previous trial. For example, the jars with no added contaminants experienced no significant change. While the lowest ppm that was reached was .3 and the fertilizer jars had the highest change. During the third trial, my results changed, the jars without any contaminants added reacted the same as they did the first two times but the fertilizer and detergent jars had a significant drop in oxygen between day 4 and 7. This drop resulted in some jars having only .1ppm of oxygen at the end of the week. Conclusions/Discussion Conclusion My hypothesis was incorrect because oxygenation decreased when contaminants were added to pond water. My goals were to help people understand how they unintentionally damage our environment. I also hoped to learn how to prevent eutrophication and what the long-term effects are. I have always been interested in finding ways to conserve resources and protect the environment so this project helped me understand how small actions are very damaging, so when you wash dirt into the water, you are not only making the water more difficult to desalinate, but you could also be contributing to eutrophication which is very damaging.	
Summary Statement This project tested the eutrophication of pond water as seen in oxygen content after adding contaminants.	
Help Received None	