



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jackson J. Humphrey</b>	<b>Project Number</b> <b>J2104</b>
<b>Project Title</b> <b>Effect of YO12N on Hymenochirus Eggs and Ankistrodesmus Algae</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The object is to test if YO12N the affects Hymenochirus frog eggs and Ankistrodesmus algae growth. <b>Methods/Materials</b> Ankistrodesmus algae growth 40 test specimens; 10ea x 3 independent variables and 10 control group specimen. 30ml of Ankistrodesmus living algae will be placed in each of 40 individual 8oz plastic containers. YO12N will be diluted with water to 10ppm, 20ppm, and 30ppm, and then added to the algae specimen. A spectrophotometer will be calibrated to 540 nanometers. 7ml of algae will be drawn from each specimen and placed into spectrophotometer. Readings will be taken on day 1 and every 2 days for 15 days. Hymenochirus frog eggs 40 test specimens; 10ea x 3 independent variables and 10 control group specimen. 10 eggs will be placed into each cup and the cups placed into a warm water bath. YO12N will be diluted with water to 10ppm, 20ppm, and 30ppm, and then added to the frog egg specimen. Frog egg hatch rates will be counted daily for 5 days. <b>Results</b> Ankistrodesmus algae growth Control- 84.0, 1%-78.3, 2%- 83.0, 3%- 80.8 Hymenochirus frog eggs Control- 5.80, 1%- 4.98, 2%- 4.10, 3% -3.02 The 2% solution had the lowest algae growth when compared to the other solutions tested, but did not show lower growth than the control. The 1% solution had the highest egg hatch rate when compared to the other solutions tested, with 85% of the control hatch rate. <b>Conclusions/Discussion</b> With our clean water supplies decreasing, a study of YO12N (Yellow Out#) as a remediation application for eutrophication is important. YO12N shows promise in reducing eutrophication without harming other species.	
<b>Summary Statement</b> Can YO12N be applied to an aquatic environment as a treatment for eutrophication?	
<b>Help Received</b> Borrowed spectrophotometer from Mr. Aalto, Sanger High School science teacher.	