



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Joel P. Ryan	Project Number J1033
Project Title Hydrogen Ion Concentrations	
Abstract	
Objectives/Goals Problem Statement: #What are the pH levels at different areas in the stream at Oak Canyon Nature Center?# Hypothesis: The pH levels in the water should be close to neutral, ranging from six to eight.	
Methods/Materials Procedure: 1. Gather the water from the varying locations 2. put in the universal indicator tablet 3. examine the color reaction Materials: a. water samples b. five test tubes c. five tablets of universal indicators, a tablet containing chemicals that will dye the water different colors depending on the pH concentrations.	
Results Results: Out of my five testing spots, two had a pH level of 7, and 3 had a pH level of 8. The average was approximately 7.6.	
Conclusions/Discussion Conclusions: The pH levels of the stream varied from neutral to slightly more alkaline than neutral. The stream is not the most hospitable place for many fish, but it is perfect for many invertebrates and amphibians.	
Summary Statement My project is testing the pH in a stream that runs through Oak Canyon Nature Center in Anaheim.	
Help Received My mother helped me pin a leaf border onto my project, drove me to my sampling locations, and financed my project. My father gave me encouragement when I needed it most.	