



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Aidan C. Stenson	Project Number J2219
Project Title The Effect of Acid Rain on Regeneration of Planaria	
Abstract Objectives/Goals The purpose of this experiment is to observe the regeneration of planaria exposed to an acid rain solution. Methods/Materials Using vinegar as a household substitute for acid rain, I created six solution strengths for observation: spring water, and 10%, 1%, 0.1%, 0.01%, and 0.001% vinegar. I decapitated five planaria for each of the groups and observed and measured the regeneration of the heads and tails over the course of seven days. Results In the first trial with 10%, 1%, and 0.1% vinegar, all of the worms died within 36 hours. In the second trial, both the control worms in spring water and the worms exposed to 0.001% vinegar recorded an average growth of 1.7 mm. The worms in 0.01% vinegar grew 1.1 mm, and the worms in 0.1% vinegar recorded an average growth of 0.6 mm. Conclusions/Discussion I conclude that acid rain significantly inhibits the regeneration of planaria. Worms exposed to vinegar suffered compromised strength and growth. This is important because if animals lower on the food chain are eliminated by pollution such as acid rain, animals higher on the food chain will also be affected.	
Summary Statement My project evaluates how exposure to acid rain impacts the regeneration of planarian worms.	
Help Received Parents helped with ordering supplies.	