



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Audrey N. Fontes	Project Number J1909
Project Title A Symbiotic Relationship	
Abstract Objectives/Goals My project is to determine if the Anacharis plant would grow more rapidly when placed in glass bowls occupied by goldfish. I believe that the Anacharis plant will grow faster when placed in glass bowls occupied by goldfish. The greater the number of goldfish, the better the rate of growth. Methods/Materials Anacharis plants measuring 10.16 cm were placed in four identical glass bowls. Each bowl was filled with tap water and placed in a lighted area. The first bowl did not contain goldfish. The second bowl contained one goldfish, the third bowl contained three goldfish, and the fourth bowl contained five goldfish. After seven days, each plant was removed and measured. All measurements were recorded. This process was repeated weekly over a six week period. Results The plant in the bowl with zero goldfish did not have any measurable growth during the six week period. The plant in the bowl with one goldfish grew 1.16 cm during the six week period. The plant in the bowl with three goldfish grew 1.16 cm during the six week period. The plant in the bowl with five goldfish had the greatest rate of growth over the test period. The plant grew 2.16 cm during the six week period. Conclusions/Discussion The Anacharis plants grew faster in glass bowls containing goldfish versus the plant in the bowl with zero goldfish. The greater number of goldfish the faster the rate of growth.	
Summary Statement The symbiotic relationship between Anacharis plants and goldfish.	
Help Received None	