



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Mary Tran; My Tran	Project Number S1921
Project Title The Effects of Varying Sea Water Ion Concentrations on Sea Urchin Fertilization	
Abstract Objectives/Goals Our objective is to determine the effects of varying ion concentrations in modified sea water on sea urchin fertilization. Methods/Materials Female sea urchins were induced to spawn; male sea urchins were induced to spawn. Eggs and sperm were introduced to each other in the varying sea water concentrations. Results We found that the absence of sodium in the modified sea water solutions (with all other naturally-occurring components present) had the most negative impact on sea urchin fertilization; In conditions where sea urchin eggs and sperm were placed in sea water solutions with the absence of sodium, no eggs were able to fertilize. Conclusions/Discussion Upon completion of our experiment, we found that the absence of ions occurring in the highest percentage in natural sea water has the most impact on the inability of the sea urchin eggs to fertilize.	
Summary Statement The purpose of our experiment is to determine the effect of varying sea water ion concentrations on sea urchin fertilization	
Help Received We owe sincere thanks to Mrs. Pam Miller and Mr. Chris Patton	