



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Marcey Nemeth; Karen Thang	Project Number S0810
Project Title Wave Break	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our objective/goal was to determine which shape of jetty works the best to prevent shoreline erosion. We believe the straight jetty will reduce the most amount of erosion.</p> <p>Methods/Materials After a plywood box was assembled, a weighed quantity of dry sand was placed into one side the box and constructed into a shoreline shape. From there, a measured amount of salt water was poured in the box opposite to the sand. Our wave maker (which was constructed from a wood board and coil springs) was placed in, pulled back a measured amount, and released. This was done every 30 seconds for 10 minutes (20 times total) for each shape of jetty. (Note: The box was cleaned out and "restocked" with the same amount of dry sand and salt water after completing the testing of each jetty.)</p> <p>Results The results show that the straight (angle) jetty accomplished our objective. It precluded the most shoreline erosion, while the curved jetty restrained the least.</p> <p>Conclusions/Discussion Due to the fact that our objective was achieved by the straight jetty, we can conclude that our hypothesis was correct. In the future, our results can help jetty developers build a shaped jetty customized for the amount of erosion they want to prevent or create. This can benefit our world's shorelines, humans, animal life, and plant life.</p>	
Summary Statement In our project, we tested to determine which shape of jetty prevents the most shoreline erosion.	
Help Received Naureen Fielding helped brainstorm ideas for building our wave maker; Steve Nemeth helped build the plywood box; Mr. Moore critiqued our project; Jill Nemeth supervised the building and testing of our project	