



CALIFORNIA STATE SCIENCE FAIR

2011 PROJECT SUMMARY

Name(s) LeAnn Marie Medina Mendoza	Project Number J1816
Project Title Refraction in Saltwater	
Objectives/Goals My hypothesis is that if I increase the salt concentration by 2.5% or add 5 grams the refracted ray will increase by 2 degrees.	Abstract First, I took a container of Morton Table Salt and then I measured 10 containers of these 5 different amounts: 1, 5, 10, 15, and 20 grams. After that, I will take the different amounts of salt and dissolve them into 90 degree Fahrenheit water; creating a 0.5%, 2.5%, 5%, 7.5% and 10% concentration. Then, I will take my red remote laser and point it into the water at an 80 degree angle. Using my protractor located in the front of my cup, I look to see the new refracted ray. I will then note the new angle and repeat this process for the different concentrations for 10 trials.
Results In the end, I learned my hypothesis was incorrect. Actually, when I increased the salt concentration by 2.5% or added 5 grams into the solution, the refracted ray is about 1 degree more than the last five grams. My graph showed a direct relation; and didn't show anything out of the ordinary.	
Conclusions/Discussion While doing this experiment, everything went the way as planned, except it took longer than I expected. If I were to practice this experiment again, I would have had a 0% concentration, just to see if the 0.5% concentration affected the results. Also, I would not have procrastinated and spend my time wisely. I would have done this experiment again.	
Summary Statement I tested the how light refracts in various salt concentrations.	
Help Received Mom for being my support system. Dad for giving me inspiration for my project. Ms. Joan Tanis for giving me advice while doing my project. Rancho Del Rey Middle School for letting me use their electronic balance.	