



# CALIFORNIA STATE SCIENCE FAIR

## 2013 PROJECT SUMMARY

|  |   |
|--|---|
| Name(s)<br><b>Max B. Olsthoorn</b>   | Project Number<br><b>S0805</b>  |
| <b>Project Title</b><br><b>Ocean Currents Flow, Direction, and Journey: Galapagos Islands Examination</b>  |   |
| <b>Objectives/Goals</b><br>Problem Statement: To test and discover where objects end up when there is a change in wind and direction of an ocean current.  | <b>Abstract</b><br>Hypothesis: I believe that the closest islands to the origin of the ocean current will receive the most successful trials. |
| <b>Methods/Materials</b><br>Materials: 2 Boxes of Moldable Clay<br>1 Large Tub<br>Hose and Water<br>4 Hand-Held Fans<br>1 Cup measure of Salt<br>1 Piece of Cork or Wood (small so it fits to scale)<br>Map of the Galapagos Islands   |   |
| <b>Procedure:</b><br>1. Print out a map of the Galapagos Islands and re-create the islands with the moldable clay. Try to make sizing#s to scale, but do not have to be precise, just approximate. Also, create the South American Coastline, including Panama and Ecuador.<br>2. Fill the tub with water using the hose. Once it is full, pour salt into the water and mix around, this way, there is a controlled environment for the experiment.<br>3. Place the 4 fans around the perimeter of the tub, one coming from the North, South, East, and West. Make sure that they are in the correct places to first create a control group.<br>4. Begin testing by turning the fans on and testing the object from each location. Do this for a total of 16 times each at the North, South, and East fans.<br>5. Once completed, move the fans around, have them coming from different directions and angles to be able to test the probability of where each object travels when coming from a different direction.<br>6. Make a graph for each of the 4 trial sets, 16 trials per each current, making for a total of 200 trials. |   |
| <b>Results</b><br>Results: The Islands that were located closest to the new origin of the newly placed ocean currents, the Eastern Islands, did in fact receive the most debris. Most of the Western Islands rarely received any   |   |
| <b>Summary Statement</b><br>To examine the affect of Ocean Currents on the Galapagos Island's Species Richness and Diversity.  |   |
| <b>Help Received</b><br>Parents helped arrange board and with my experiment.   |   |