



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) David W. Dewey	Project Number J0807
Project Title Tornado in a Box	
Objectives/Goals Problem Statement: Is the size of a tornado affected by the water temperature over which it is created? Hypothesis: I think that when the water temperature rises, the size of the tornado will increase accordingly.	
Abstract Methods/Materials Procedure: # Design & construct a chamber made of wood & glass to replicate actual tornado like conditions # Put the dry ice in the chamber with the water (testing at 5 different temperatures) and record the diameter of the core of the tornado with each water sample # The water temperature was the variable I altered to test the hypothesis 10 degrees Celsius in 10 degree increments up to 50 degrees Celsius # I used 130 grams of dry ice each time and repeated the test twice with each water sample # I measured the diameter of the core of each tornado (based on 5 different water temperatures) in cm Materials: Dry Ice - Exhaust Fan - Wood & Glass to construct chamber # Metal Bowl - Water - Measuring tape	
Results The tornado had the biggest diameter when the water temperature was at the highest degree of 50 degrees Celsius.	
Conclusions/Discussion My hypothesis was correct. Tornadoes are much bigger when they are created over hot water. In my experiment, the dry ice sublimated (the process of going from a solid to a gas) at a higher rate, which in turn created a bigger tornado.	
Summary Statement Designed, built and tested a Tornado Test Chamber to observe effects of varying water temperature	
Help Received Father helped with Tornado Test Chamber construction	