



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Adam Stefany	Project Number J0397
Project Title Stability of Various Shaped Buildings in Increasingly Strong Winds	
Abstract Objectives/Goals People's homes get destroyed by tornados and hurricanes. I wanted to find out if buildings shaped like a dome or a pyramid stand up better to high winds than a normal rectangular house with a sloped roof. Methods/Materials I put each building on a concrete floor two meters from a fan. I pushed the fan closer to each building. I recorded how far the fan was from each building type when it was blown from its position. Results I found that the fan had to be closest to the dome building (26.8 cm) before it would move. When the wind hit the long side of the house-shaped building it was still far away (65.5 cm). When the wind hit the short side of the house-shaped building it was much closer before the building moved (45.7 cm). The pyramid moved when the fan was 43.1 cm away if a corner was facing the wind and 45.0 cm away if the flat side was facing the wind. I thought that the pyramid would be most easily moved. Conclusions/Discussion This experiment shows that the strongest winds are needed to move a building shaped like a dome. The weakest winds move a building shaped like a normal house especially if they hit the long side of the house. A pyramid stands up to winds better than a normal house but not as well as a dome. In the future I would also like to find out how easily buildings of different shapes would collapse in high winds.	
Summary Statement How well do buildings of various shapes withstand windstorms.	
Help Received Father cut buildings with power saw, mother helped type.	