



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Drew J. Wodecki	Project Number J0132
Project Title Wind Turbine: Do More Blades Mean More Power?	
Objectives/Goals Goal: To see how many propellers would have the most electricity output on a home made wind turbine.	
Abstract	
Methods/Materials Method: 1. Created frame from PVC pipe using glue, saw and file. 2. Made propellers and hub from balsa wood using exact measurements for each. 3. Connect computer fan motor into PVC frame. 4. Tested under household fan with same distance and speed for each test. 5. Took ten readings from 3,4,5 and 6 propellers on the turbine and divided by ten to find average result for each. Computed data with a calculator and own brain to establish a clear result.	
Results The 3 blade wind turbine produced an average of 0.2431 volts. The 4 blade produced 0.2549 volts. The 5 blade turbine produced 0.2664 volts and the 6 blade produced 0.2516 volts. The 5 blade propeller was the best at capturing and converting wind to create power.	
Conclusions/Discussion In conclusion, more blades generally equaled more power, but when there was too much weight on the wind turbine the output dwindled. For my experiment, the 5 blade wind turbine was the best at capturing and converting wind to power. I would have liked to curve the blades to capture more wind. I would have liked to use a stronger motor and I would have liked to have a longer period to test each method.	
Summary Statement This project shows that for my wind turbine, five blades captured and converted more power than more or less blades.	
Help Received Dad helped with power tools, Evan at Capitola Hobbies for info on DC motors and science-math teacher Mr. Evert.	