



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Evan T. Clark	Project Number J0106
Project Title Can the Wind Really Work for You?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project was to find out what type of rotor design on a wind turbine generates the most wind energy. My hypothesis was that I thought the rotors that were rectangular in shape and curved in opposite directions would generate the most wind energy.</p> <p>Methods/Materials Seven different rotor designs were made using bendable straws, paper clips, paper, tape, and glue. The designs were: rectangular curved clockwise, rectangular curved counter clockwise, rectangular curved in opposite directions, rounded, serrated, zigzag, and angled. The rotor designs were tested on a turbine that was made from a 1 L. plastic bottle, 500 mL. plastic bottle with cap, bendable straws, strings, tape, paper clips, metal washers, and metal key chains. Using a small table fan, each rotor was tested three times to see how much weight it could carry.</p> <p>Results The results consistently showed that the rotors that were rectangular and curved in opposite directions produced the most energy.</p> <p>Conclusions/Discussion My conclusion is that the design of a rotor does make a difference in how much energy is produced. Curving the rotors in opposite directions produces a greater amount of energy than not curving the rotors or even curving them in the same direction.</p>	
Summary Statement My project tested different rotor designs to see which generated the most energy.	
Help Received My dad helped me drill holes in the bottles and my mom helped me with the board.	