

Wind turbine research plan

Team name: turbo building clan

Purpose: design and build a wind turbine that generates the most energy

Hypothesis: we think a geared drive train with a popsicle shaped blade made of cardboard with a pitch of 25 degrees will generate the most energy.

Materials:

Fan

Vernier

Kid wind turbine kit

Multimeter

Hot glue

Six wooden vowels

Materials you are making the blade out of...

Cardboard

Procedures

1. build the Vernier wind turbine structure including gear drive train
2. design and build blades
3. test the design shape, number, and pitch angle of using a multimeter. Compare the energy output of each design
- 4.

trial	1	2	3	4	5
Number of blades	6	6	6	6	4
Blade pitch	25 degrees	40 degrees	15 degrees	30 degrees	30 degrees
Turbine voltage	3.44	2.53	3.36	3.51	2.56

Conclusion : we conclude that the popsicle shaped blade which was made out of cardboard that operated at a blade pitch of 30 degrees generated the most volts of electricity (3.51 volts=3510mw).