

CWSF 2016 - Montreal, Quebec



Daphné Dupuis, Mya St Jean

POWER UP! Wind Turbine Efficiency

Challenge: Energy

Category: Junior

Region: Algoma Rotary

City: Sault Ste. Marie, ON

School: Rosedale P.S.

Abstract: Wind turbine efficiency was tested using a variety of fixed blade angles (pitch) and a DC motor. Each turbine was exposed to three different wind speeds, and the DC voltage produced by each was measured using a voltmeter. We hypothesized that a 45° blade angle would produce maximum output, or best efficiency, in varying wind conditions. This was proven incorrect by our trials.

Biographies

Daphné - My name is Daphné Dupuis. I am 13 years old and in 8th grade. I attend a French Immersion program at Rosedale Public School in Sault Sainte Marie. Ontario. A competitive swimmer and highland dancer, I enjoy doing gymnastics in my backyard and on my trampoline. I also like reading, and going to the mall or movies with my friends. I plan to take over my dad's business in water turbine/generator engineering after attending college or university. I am currently in an AP math program, which I am really enjoying. I have received the engineering award twice at my regional science fair, and this is my first time attending CWSF. I am extremely excited...

Mya - My name is Mya St Jean. I am from Sault Ste. Marie Ontario. I am in grade eight at Rosedale Public School and I am thirteen years old. I was inspired to do this science project by my partner's dad because he is an Engineer who works on water turbines. After doing research we thought it would be cool to determine the most efficient blade pitch for a wind turbine to create maximum energy. For further investigation on my project I would do more angles to see if one of those other angles would be more efficient. My advice to other students who want to do a project is to have lots of research or depending on what you do, do more than one trial t...