

## CWSF 2017 - Regina, Saskatchewan



### Braxton Chan

#### Experimental Testing of Mathematical Model for Increasing Wind Turbine Power

**Challenge:** Energy

**Category:** Junior

**Region:** East Kootenay

**City:** Cranbrook, BC

**School:** Parkland Middle

**Abstract:** Renewable energy is essential for the continued supply of the world's power. This project devises a more efficient and productive means to generate power output from a high altitude wind turbine (HAWT). Mathematical modelling was first used to predict a possible improved power output. Experimental testing was then performed to determine if an improved power output could be achieved in actuality.

#### Biography

I am presently in Grade 8 residing in the beautiful Rocky Mountains in BC with my younger brother and my parents. I play Bantam hockey, Whitecaps soccer and enjoy snowboarding, surfing and kitesurfing. I am a drummer for my school band. I have always been an environmental advocate which naturally led to my project idea pertaining to renewable energy. I believe the results of my experiment warrant further studies to someday apply my innovation in the real world. I plan to eventually construct a viable model of a high altitude wind turbine that could be tested for energy usage on a much larger scale. This will require the application of wireless technology, the consideration of high altitude environmental impact, and light-weight material construction. My best advice for future science fair students is to come up with an idea that you can imagine that would be enjoyable to study and test. This way, the hard work and long hours will not seem so hard or long.

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