

## CWSF 2009 - Winnipeg, Manitoba



### Medford Lutz

#### Brrr... It's Freezing

**Division:** Engineering & Computing Sciences / None

**Category:** Junior

**Region:** Annapolis Valley

**City:** Kings County, NS

**School:** Pine Ridge Middle School

**Abstract:** Biodiesel is an environmentally friendly fuel source. Made from vegetable oil, biodiesel is becoming popular throughout the world. However, in colder climates like Canada, this biofuel can clog fuel lines when temperatures drop. I experimented with different solutions to adapt the biodiesel to withstand frigid temperatures. I created a biodiesel that didn't cloud point up to a temperature of -17 Celsius.

#### Biography

Medford Lutz is a grade eight student at Pine Ridge Middle School in Kingston, N.S. His love of science began at an early age in grade primary when he made an air power game from a balloon and a ping pong ball. Since then he has grown a square watermelon, captured snowflakes and made methane and biodiesel. He has represented his school several times at the regional level. Medford has earned many medals and awards such as Acadia University Geology Award 2005, N.S. Science Teachers Award 2006, A.V.R.S.F. Best Project 2007, and most recently in 2009, Acadia University Earth and Environmental Best Senior Award and A.V.R.S.F. Best Earth Space Project. He enjoys many sports, his favorites being basketball, baseball and badminton. He is currently working towards a bronze level in the Duke of Edinburgh Award. Although over four years away, Medford plans to attend Acadia University to study environmental sciences.

Youth Science Canada  
PO Box 297  
Pickering ON L1V 2R4  
[www.youthscience.ca](http://www.youthscience.ca) / [info@youthscience.ca](mailto:info@youthscience.ca)  
416-341-0040