

# CWSF 2012 - Charlottetown, Prince Edward Island



## Jacob Brozyna

### All Shook Up: Liquefaction

**Challenge:** Environment

**Category:** Junior

**Region:** Toronto

**City:** Etobicoke, ON

**School:** St. Michael's Choir School

**Abstract:** Liquefaction is an important ground failure phenomenon that can occur in the wake of earthquakes. Different amounts of vibrating force were applied to the sand saturated with water in order to achieve liquefaction. The independent variable was the amount of force applied (4 amps and 8 amps) and the dependent variable was how quickly the sand liquefied.

### Biography

I'm a grade 8 student at St. Michael's Choir School in Toronto. Currently I'm on tour with the senior choir in the Maritimes. I'll be home in Toronto for a few days and then I'm off to CWSF in Charlottetown. This summer I'm doing a grade 12 InterDisciplinary studies credit (music and history) in central Europe for the month of July. We'll be going to Krakow, Prague, Vienna, Budapest and Poprad with conductor Dr. Andrzej Rozbicki. I'm 6' 2" so I love flying economy... O\_o Besides music, competitive swimming, languages (French, Polish, Finnish and Latin) history, politics and science are my chief interests. My dad's love of power tools inspired my liquefaction research; we tried a lot of different tools to create the vibration necessary to liquefy water saturated sand. Last year's earthquake in Christ Church, New Zealand piqued my interest in this topic. I'm interested in architecture and design and how structures interact with their environment. I'd advise other students to look carefully at the project criteria your teacher gives you, get your family involved (my little brother filmed the experiments on our iPad!) and enjoy the process.

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