

# CWSF 2010 - Peterborough, Ontario



## Calvin Rieder

### Water, water, everywhere, Nor any drop to drink: Atmospheric Water Condensers

**Division:** Life Sciences

**Category:** Junior

**Region:** Bay Area

**City:** Oakville, ON

**School:** Oakville Christian School

**Abstract:** The atmosphere as a source of drinking water was studied in this project. Four prototype passive atmospheric condensers were designed and constructed. An experimental procedure for measuring the volume of condensate developed. All prototypes condensed atmospheric water. Their efficiencies differed and were dependent on the surface area and shape of the inner surfaces. The volume condensed was proportional to the relative humidity of the atmosphere.

#### Biography

Calvin is a Grade 7 student at Oakville Christian School in Oakville, Ontario, where he likes all subjects while favouring math, science and music. He was born in Sydney, Australia and lived in the United States before settling in Canada. Calvin has been a competitive swimmer and earned the Bronze Star and Bronze Medallion certifications as steps to completing lifeguard training. He also plays baseball and basketball. He has a great interest in oceanography and one of his ambitions is to return to Australia to experience the Great Barrier and Ningaloo reefs. Calvin has been training in voice, theatre and piano since age six. He is a member of the Canadian Children's Opera Company and has performed in several professional and student theatre productions including La Boheme with the Canadian Opera Company, Seussical the Musical with Theatre Aquarius and performances with the Toronto Symphony Orchestra. He has won several awards for voice including First Class Honours with Distinction in Royal Conservatory examinations. Calvin's favourite holidays include swimming, canoeing and hiking at his family's cottage or on many camping trips across Ontario and Quebec. These experiences formed the inspiration for this project to address the global water problem.

#### Awards

#### Value

CSSE Engineering Innovation Award - Junior Sponsor: Canadian Society for Senior Engineers	\$500
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
Bronze Medal - Engineering - Junior Sponsor: Youth Science Canada	\$300
<b>Total</b>	<b>\$1 800</b>