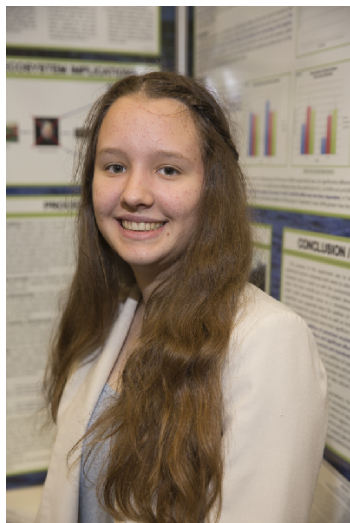


# CWSF 2016 - Montreal, Quebec



## Isabella O'Brien

### Aquatic Osteoporosis: Remediating the emerging problem of lake calcium decline

**Challenge:** Environment

**Category:** Intermediate

**Region:** Bay Area

**City:** Dundas, ON

**School:** Westmount S.S.

**Abstract:** Lake calcium decline is an emerging environmental problem affecting soft water shield lakes in Canada, North Eastern United States and Scandinavia. Calcium sensitive *Daphnia pulex*, a key component of many aquatic food webs, are at risk. This project investigates the possibility of remediating this problem by adding pulverized recycled shells to calcium-deficient lakes to help maintain *Daphnia pulex* populations, thus protecting lake biodiversity.

#### Biography

Isabella is a Grade 9 student at Westmount Secondary School. Her interest in science was sparked by her primary science teacher and since the age of 9 she has participated in school, regional, virtual, national and international science fairs. Isabella is passionate about environmental issues and is also keenly interested in politics and had the honour to work as a Legislative Page in the Ontario Legislature for five weeks in 2014. After winning a Gold Medal and the Junior Environmental Challenge award at the 2014 Canada Wide Science Fair for her project on ocean acidification mitigation, Isabella then had the privilege to be selected the following year by Youth Science Canada to be the Broadcom Masters International delegate for Canada. Also in 2015 Isabella was selected as one of 20 Global finalists for the Google Science Fair and she has since been appointed the Ocean Youth Ambassador for the NGO Lemonseas, educating youth about the issue of ocean acidification through social media and video link presentations at COP21 in Paris. She is currently continuing her research into acidification issues and is using the techniques she has developed as a possible method to remediate the emerging problem of lake calcium decline.

#### Awards

#### Value

Challenge Award - Environment - Intermediate Sponsor: Youth Science Canada	
Excellence Award - Intermediate - Gold Medal Sponsor: Youth Science Canada	\$250
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$4 250</b>