

# CWSF 2015 - Fredericton, New Brunswick



## Kiri Daust

### How Fast Does Ice Melt? Extent and Implications of Glacial Retreat in the Skeena

**Challenge:** Environment

**Category:** Senior

**Region:** Pacific Northwest

**City:** Telkwa, BC

**School:** Smithers Secondary

**Abstract:** Globally, glaciers are retreating. Using satellite images, I determined that Skeena Watershed glaciers have decreased by 35% since 1975, with differences in melt rate correlated with shape. I calibrated a mass-balance model based on micro-experiments and historic melt and projected melt into the future for two climate projections. Models suggest from 70 - 100% decrease in glaciers by 2100, with potential impacts to aquatic ecosystems.

#### Biography

I love music and science. I've participated in the Smithers science fair for 10 years now, and each year it's exciting. It's hard to believe that this is my sixth and last CWSF! Last year, I had the honour of participating in the Taiwan International Science Fair. It was so neat to see how science is a universal passion. I think that science should be used to understand nature and the world around us. I have taken grade 10 violin, and love playing dramatic classical music. I play with some local orchestras, recently performed a solo with the PGSO, and went on an amazing tour with the National Youth Orchestra of Canada last summer. Baking is also a passion. I love the science and feel (and taste) of bread, and am trying to improve my gluten-free baking. I lived the first eight years of my life in a 300 square foot log cabin on François lake two hours from town, with no running water or electricity, which I think has helped me appreciate nature. I'm super excited to be attending Quest University in the fall, and I hope to have a career that allows me to teach and research.

#### Awards

#### Value

Statistical Society of Canada Award - Senior Sponsor: Statistical Society of Canada	\$1 000
Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of New Brunswick Canada-Wide Science Fair Scholarship Silver Medallist - \$2500 Entrance Scholarship Sponsor: University of New Brunswick	\$2 500
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$12 000</b>