

# CWSF 2011 - Toronto, Ontario



## Mikaela Preston

### Population Dynamics in Algal Bioreactors

**Challenge:** Discovery

**Category:** Intermediate

**Region:** York

**City:** Markham, ON

**School:** Havergal College

**Abstract:** The experiment explored if algal photobioreactors populated with multiple species would lead to greater thermal stability than single-species systems. The effects of a sudden temperature drop were studied on both single and multi-species systems. All combinations of three different species were tested. The system of all three species of algae demonstrated greater stability throughout the temperature shock trials than the single-species bioreactors did.

#### Biography

"Dream as if you'll live forever, live as if you'll die today."-James Dean. That quote basically sums me up. I have goals in life that I wish to achieve such as: attending the university of my choice, completing a Ph.D in a field of science, getting a job that I love, and experiencing amazing things along the way. While I am focusing on these goals, I try to live life to its fullest. I don't believe in just going with the flow; I like to try new things and do what I can for the world we live in. That's why at school I participate in the art club, continue to take drama as a course, am part of sports teams, am involved in a Free The Children community club, and am on the debate team. I also enjoy snowboarding, listening to music, and being with my amazingly supportive friends. Two of my most memorable experiences in my life so far are my trip to Greece for a turtle conservation volunteer project, and, not surprisingly, last year's CWSF in Peterborough. My message is: do what you love, and don't be afraid to stand up for it.

#### Awards

#### Value

Renewable Energy Award - Intermediate Sponsor: Ontario Power Generation	\$750
Challenge Award - Discovery - Intermediate Sponsor: Youth Science Canada	\$750
Excellence Award - Intermediate - Gold Medal Sponsor: Youth Science Canada	\$1 500
The University of Western Ontario Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: University of Western Ontario	\$4 000
Platinum Award - Best Intermediate Project Sponsor: Youth Science Canada	\$5 000
<b>Total</b>	<b>\$12 000</b>