

# CWSF 2010 - Peterborough, Ontario



## Rebecca Sandrelli

### A Floral Solution to Pollution

**Division:** Physical & Mathematical Sciences

**Category:** Intermediate

**Region:** Renfrew County

**City:** Pembroke, ON

**School:** Bishop Smith Catholic H.S.

**Abstract:** A cost-efficient method to remove pharmaceuticals from waste water effluents has proven to be elusive. Phytoremediation utilizing water hyacinth (*Eichhornia Crassipes*) was implemented to remove low level concentrations of pharmaceuticals, 1ppm. *Daphnia magna* were employed as bio indicators for the 30-day chronic bioassay. Results indicate phytoremediation did significantly decrease the effects of pharmaceuticals on heart rate, fecundity ratio, and mortality rate of bio indicators.

### Biography

My name is Rebecca Sandrelli and I am a grade 10 student at Bishop Smith Catholic High School in Pembroke, Ontario. I have very diverse interests, some which include sports, science and children. I have been a member my high school Cross Country Running Team, Nordic Ski Team, Soccer Team and Envirothon Team this year. I am a certified soccer referee in Ontario and play and referee soccer in our city league. I have loved volunteering at a daycare centre for the past 3 years and I am pursuing summer employment is as a Camp Counselor. Being involved in science fairs has provided me with very exciting opportunities. I have twice been a Canada Wide Science Fair finalist and winner and was also a participant for the Schools on Board Field Program aboard the CCGS Amundsen this past November. Seeing the Arctic first hand, working with a scientific team and learning about the Inuit culture with nine other Canadian students was very exciting. Science has opened doors, created lifelong friendships and will continue to shape my future as I prepare for post secondary education.

### Awards

### Value

The University of Western Ontario Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: University of Western Ontario	\$4 000
Gold Medal - Environmental Innovation - Intermediate Sponsor: EnviroExpo, Presented by VIA Rail Canada	\$11 500
<b>Total</b>	<b>\$15 500</b>