## Rachel Brouwer

### Can We Improve the Quality of Water in Developing and Third World Countries?

**Challenge:** Environment
**Category:** Junior
**Region:** Halifax
**City:** Bedford, NS
**School:** Bedford Academy

**Abstract:** Poor water quality and accessibility is a worldwide problem. The purpose of my experiment is to improve the quality and accessibility of water in 3rd world and developing countries by designing and building a water filter transportation system and novel wax indicator. I tested my system using E.Coli. I was able to eliminate 100% of the E.Coli from the contaminated water samples.

### Biography

Hello! My name is Rachel Brouwer. I just turned 13 years old. I am a 8th grade student at Bedford Academy in Bedford, Nova Scotia. I have many hobbies and activities. I play basketball, soccer, swim competitively and play percussion in my school band. I love volunteering and fund raising for our many school charities and have received the young entrepreneur award and have been nominated by my school to receive the citizenship award this year. I just started my own natural skin care product business and I am currently selling my products to raise funds for our local children's hospital, the IWK Health Centre. My favorite subject in school is science. I have a passion for learning, discovering how things work, grow and develop and how we can improve them. This is my second year working on my science fair project. My dream is to patent my water filter transportation system and make a difference some day to provide clean drinking water and help all the women and young girls in developing and 3rd world countries who walk several kilometers everyday to provide water for their families. I am really looking forward to the CWSF!

| Awards | Value |
|---|---|
| Challenge Award - Environment - Junior Sponsor: Youth Science Canada | |
| Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada | $250 |
| Western University Scholarship Gold Medallist - $4000 Entrance Scholarship Sponsor: Western University | $4 000 |
| Total | $4 250 |