

CWSF 2011 - Toronto, Ontario



Hayley Todesco

CO2 Sequestration: Bio-Energy with Carbon Capture and Storage

Challenge: Energy

Category: Intermediate

Region: Calgary Youth

City: Calgary, AB

School: Queen Elizabeth Junior Senior High School

Abstract: A dual approach to addressing the issue of climate change through CO2 sequestration was researched. Geologic sequestration to target industrial emissions was investigated by measuring the effects on physical and chemical properties of sandstone storage rock. Specifically, changes in seismic wave velocities (leakage) and brine composition (ionic trapping). Biomass-related sequestration to address household waste and agricultural emissions was explored by creating a CO2 sequestration prototype.

Biography

My name is Hayley Todesco and I am a grade nine student. Participating in my local science fair for five years, my previous projects were in the areas of engineering, agriculture and the environment. At my school, I have been part of the Youth Volunteer Corps, Jazz Band, Junior Girls Volleyball and Badminton Teams. I am also part of the Concert Band Program where I play the french horn. My other interests include skating, art, gardening and swimming. In 2008 my Synchronized Skating Team participated in the Skate Canada National Competition. I am still uncertain what I want to be when I grow up, so I have been using the regional science fairs to explore different areas of science to see which ones are most interesting to me. It is very exciting to be participating in the Canada Wide Science Fair again and I look forward to the overall experience.

Awards

Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$700
The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
Total	\$2 700