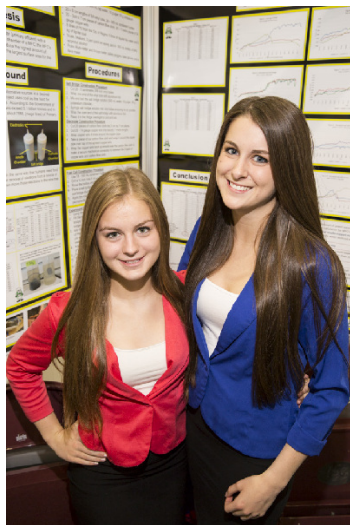


# CWSF 2015 - Fredericton, New Brunswick



## Kaylee Hayko, Kristi Hayko

### A Novel Approach to Bioenergy Production Using Primary Effluent and Coal

**Challenge:** Energy

**Category:** Senior

**Region:** Regina

**City:** Regina, SK

**School:** Winston Knoll Collegiate

**Abstract:** Our project optimizes power production by altering the balance of coal and waste water in a two chamber microbial fuel cell. Waste water volume was fixed and the mass of the coal in the anode chamber was set at 50g, 150g and 250g. Experimental results validated our hypothesis stating, the fuel cell with the highest amount of coal will produce the most energy.

#### Biographies

Kaylee - My name is Kaylee Hayko. I was born on March 23rd, 1997 and am 18 years old. I live in Regina, Saskatchewan. I'm in Grade 12 at Winston Knoll and consider myself an active individual. I've been playing volleyball for 7 years, softball for 9 years, and basketball for 12 years. Although sports are important, academics play a big role in my life. I have competed in the past three Canada Wide Science Fairs in Charlottetown, Lethbridge, and Windsor. This year, my sister and I have paired up for a second time to create a science experiment called, A Novel Approach to Bioenergy Production Using Primary Effluent and Coal, where we wanted to produ...

Kristi - My name is Kristi Hayko. I was born on June 10th, 1999 and I am 15 years old. I live in Regina, Saskatchewan and I am in Grade 10 at Winston Knoll Collegiate. I am a very active person and spend many hours on the basketball court. Although basketball is my passion, I am also involved in softball and handball. In school, I am a member of the Student Representative Council where I organize student activities and promote school spirit. Although extra-curricular activities consume the majority of my time, academics also play an important role in my life. In school, I am particularly interested in Math and Science. In the future, I hope to become ...

#### Awards

#### Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$2 000</b>