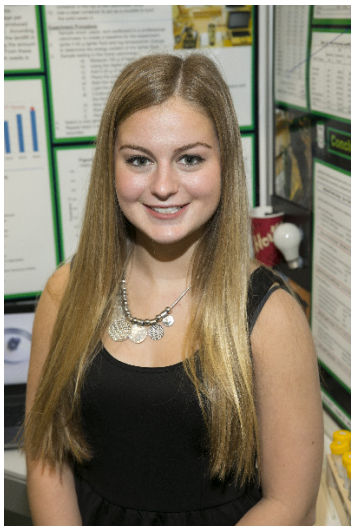
CWSF 2017 - Regina, Saskatchewan



Kristi Hayko

Landfill Optimization: Converting Solid Waste to Energy

Challenge: Environment
Category: Senior
Region: Regina
City: Regina, SK
School: Winston Knoll Collegiate

Abstract: Through experimentation and analysis, the goal of this project was to design and build a lab-quality calorimeter that would determine the maximum energy potential from solid waste heading into the City of Regina landfill. Producing an alternative form of power, while optimizing the volume of solid waste headed for long-term storage, will ultimately benefit the environment.

Biography
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 a Neonatal Nurse. This year, our experiment is called, A Novel Approach to Bioenergy Production Using Primary Effluent and Coal, where we wanted to produce the maximum amount of power in a Microbial Fuel Cell (MFC) without adding supplementary nutrients and chemicals to the anode chamber. MFC's have the potential to not only produce electricity but to also act as a preliminary treatment to raw sewage.

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
Total	$2 000

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