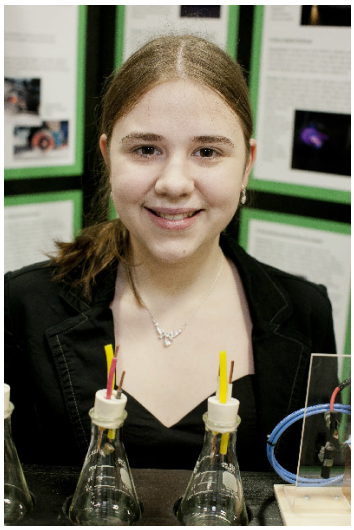
CWSF 2011 - Toronto, Ontario



Jennifer Csele

Determining Heavy Metal Contamination in Soil Using Spectroscopy

Challenge: Discovery
Category: Intermediate
Region: Niagara
City: Welland, ON
School: Notre Dame College School

Abstract: A series of experiments were conducted to determine the configuration of an Atomic Emission Spectroscopic lamp to test soil for heavy metal contamination. It was thought that a hollow cathode lamp configuration (where soil is the cathode) would work best, however an arc configuration proved to be superior. Numerous contaminant metals could be detected with the exception of nickel (due to cyanogen band interference).

Biography
Jennifer Csele currently resides in Welland, located in the heart of the Niagara Region. She is fifteen years old and presently in grade nine at Notre Dame College School in the academic stream. The career path which she would like to pursue would be to become an engineer. She has recently presented her project at the 2011 regional science fair. Last year she won both the Brock University Chemistry award and the silver medal in the junior division. She also competed in the Canada-Wide National Science Fair in 2010. Upon participating in the 2011 regional fair, she won multiple special awards as well as gold and best-in-fair. She has competed in the Gauss Math Test in which she placed in the top 25% as well as the Waterloo Math Contest. Upon participating in the Regional Historica Fair, Jennifer has won the Archives of Ontario award and the Honourable Laurier L. Lapierre, O.C. award. She has also participated in the school board chess tournament for the past three years.

Awards	Value
Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	$300
The University of Western Ontario Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: University of Western Ontario	$1 000
Total	$1 300