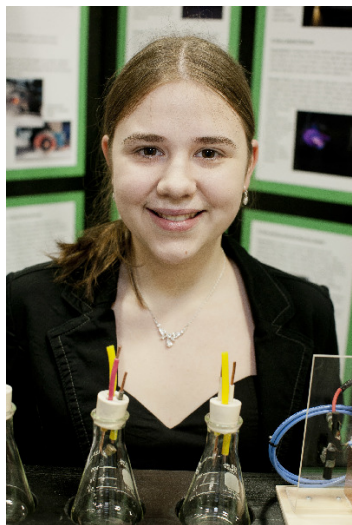


## ESPC 2011 - Toronto (Ontario)



### Jennifer Csele

#### Determining Heavy Metal Contamination in Soil Using Spectroscopy

**Défi:** Découverte

**Catégorie:** Intermédiaire

**Région:** Niagara

**Ville:** Welland, ON

**École:** Notre Dame College School

**Sommaire:** 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).

#### Biographie

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.

#### Prix

#### Valeur

Prix d'excellence - Intermédiaire - Médaille de bronze	300,00 \$
Commanditaire: Sciences jeunesse Canada	
Bourse d'études de l'Université Western Ontario	1 000,00 \$
Médaillé de bronze - Bourse de début d'études de 1 000 \$	
Commanditaire: Université Western Ontario	
Total	1 300,00 \$