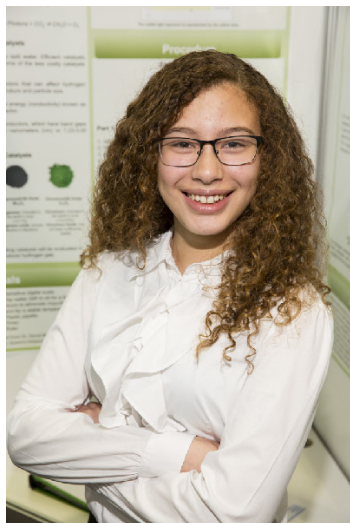


# CWSF 2015 - Fredericton, New Brunswick



## Lydia Elbatarny

### Bubbling with Energy

**Challenge:** Energy

**Category:** Junior

**Region:** Frontenac, Lennox & Addington

**City:** Kingston, ON

**School:** Calvin Park P.S.

**Abstract:** The purpose of this experiment was to evaluate and compare the hydrogen gas production resulting from photocatalytic water splitting using four different metal oxides as catalysts. The theory that the efficiency of the hydrogen production is based on the metal oxide's light absorption capacity (band gap) was tested. From this experiment, materials to efficiently produce hydrogen fuel, an alternative energy source, were identified.

#### Biography

My name is Lydia Elbatarny. I am a grade 8 student in the Challenge Program at Calvin Park P.S., Kingston, Ontario. I enjoy the arts, basketball and swimming. I always aim to excel in academics and extracurricular activities and always look for new challenges. My favourite subjects are math and science. Due to my love for science, I aspire to study medicine and become a physician. Having been interested in renewable energy, I researched recent advances and projects on this important issue. I was intrigued by the term "Artificial Photosynthesis". I further investigated this new topic and formulated an experiment to address one of its limitations. I had lots of fun researching and completing my project. After a couple years of successful science fair projects at the regional level, I am thrilled to be participating in the Canada Wide Science Fair this year in New Brunswick!

#### Awards

#### Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000