

## CWSF 2016 - Montreal, Quebec



### Micah Windsor-Freeman

#### Learning from Flint: Is NaOH the Solution to Pb-Contaminated Drinking Water?

**Challenge:** Environment

**Category:** Junior

**Region:** Northwestern Ontario

**City:** Shuniah, ON

**School:** Claude E. Garton

**Abstract:** In response to a local pilot study in which sodium hydroxide is being added to drinking water to neutralize lead, I compared the effects of lead- and sodium-hydroxide-contaminated water to uncontaminated drinking water on plant growth. After four weeks I observed that sodium hydroxide is an effective method of neutralizing lead and therefore may be less harmful than leaving lead-contaminated water untreated.

#### Biography

I am Micah Windsor-Freeman and I go to Claude E. Garton Public School. This is my second time at CWSF. I am very interested in chemistry (reactions, nuclear transmutation), cell biology (cell structure, mitochondrial ATP production) and quantum physics (quantum computing, quantum key distribution). In the future, I hope to get a job at the Thunder Bay Regional Research Institute as a research data analyst or cytologist. I did this project because of the problem in Thunder Bay with lead service pipes leaching into the drinking water, and the Current River pilot study. I have already mentioned my career plans, but specifically, as a cytologist, I would like to study mitochondria, ATP, ADP and the ATP synthase enzyme. For anyone thinking about doing a project, don't give up just because it takes a lot of time and effort and hard work. Once it's completed, you will be left with the feeling that you can accomplish anything (which is mostly true anyway).

#### Awards

#### Value

Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	\$250
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Total	\$4 250