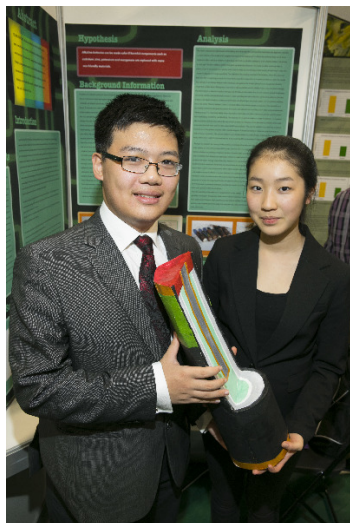


## CWSF 2017 - Regina, Saskatchewan



### Grace Xiong, Edward Shen

#### Double A Plus: An Eco-friendly Alternative to the Alkaline Battery

**Challenge:** Energy

**Category:** Intermediate

**Region:** Toronto

**City:** Toronto, ON

**School:** Marc Garneau Collegiate

**Abstract:** 15,000,000,000 alkaline batteries enter landfills each year, resulting in battery pollutants contaminating the environment. To solve this, we propose replacing toxic battery components with eco-friendly materials. Our innovation has the potential to reduce pollution, prevent disease, and make the world a greener, better place. We call it Double A Plus.

#### Biographies

Grace - HI! I'm Grace, a grade 9 student who attends the TOPS program at Marc Garneau Collegiate Institute. Having spent the majority of my elementary years at Claude Watson School for the Arts, an arts-enriched middle school, I had seriously questioned if pursuing sciences was ever at the slightest, counter-intuitive. Nevertheless, I took a plunge and applied to multiple science based secondary programs. I remember the summer before freshman year, I accepted that I would lose touch with most of my artistic training. However, I always kept an optimistic perspective. As time passed, every experience I had, every conversation I held expanded my horizon...

Edward - My name is Edward and I am a Grade 9 finalist of the CWSF. My partner and I created our project "Double A Plus". As a student I am very interested in computer science and electronic technology. Our inspiration for our project came from the daily use of electronics and the negative impacts its batteries have on the environment. Further investigations we can make on our project involves the research for more energy rich materials and new battery concepts. I am a student of the TOPS program of Marc Garneau Collegiate Institute. My preferred subject areas are mathematics and science, and I also like computer science and music. My interest is in p...

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