

CWSF 2014 - Windsor, Ontario



Raymond Wang

Sustainable Smart Sanitizer

Challenge: Innovation

Category: Intermediate

Region: Greater Vancouver

City: Vancouver, BC

School: St George's School

Abstract: Waste management is a growing crisis with densifying population and food scrap programs. Contents of outdoor garbage bins endanger public health, having pungent pathogens attracting wildlife. A photovoltaic powered microcontroller moderated ozone treatment system was innovated to periodically and sustainably deodorize and sanitize containers. Experiments qualitatively and quantitatively verified its functionality, efficiency, reliability and feasibility for near-immediate application to outdoor garbage bins currently in circulation.

Biography

Raymond is a Grade 10 Top Academic and Service Captain at St. George's School. Passionate about innovation, he received 2 Gold Medals consecutively at CWSF 2011 & 2012, and was the sole Canadian Regional Finalist in his age group at the 2012 Google Science Fair. His previous projects, including the Weather Harvester and Smart Knee Assistant, were recognized by organizations like IEEE and the Canadian Society for Senior Engineers, and continue to undergo development for the global market. This year, Raymond's passion for sustainability inspired his innovation of the Smart Sanitizer. Uniting like-minded youth across the nation, Raymond also founded Sustainable Youth Canada, a youth-led non-profit that is making a difference in regions established from coast to coast. Giving back to STEM, Raymond was an invited speaker at TED@Vancouver, and currently sits on the International Student Editorial Board at the Canadian Young Scientist Journal. In his spare time, Raymond enjoys music as a Clarinetist for the National Youth Band, self-taught French Horn player, and ARCT Piano Performer. Keeping fit, he is also involved with school Swimming and Rowing teams. Raymond especially enjoys computer science as a Microsoft Certified Technology Specialist, programming in languages like Java, C+...

Awards

Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$100
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 100