

# CWSF 2015 - Fredericton, New Brunswick



## Joshua Delacruz

### Prevent Cancers - "Zeolite-X" Filtering Out Radiation from Radioactive Tobacco

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Peace Country

**City:** Grande Prairie, AB

**School:** Grande Prairie Composite High School

**Abstract:** It's a little known fact that the majority of tobacco sold in stores is radioactively contaminated with Polonium 210 and Lead 210. Radioactive contamination is estimated to account for 90% of all tobacco cancers. This project was designed to confirm the presence of high radioactivity in cigarettes, determine which brands were the most radioactive and create a novel filtration device that reduced radioactive particle delivery.

#### Biography

Hey, I'm Josh Delacruz & I love science. You can find me ripping bmx or skateboarding way past my curfew. I don't smoke but so many people I know do around me and I'm exposed to second hand smoke a lot, it's part of the subculture. Smoking has been linked with cancer and I don't ever want to see myself or my friends get cancer, but they are all addicted and can't quit thus the exposure continues. So when I heard that cigarettes were radioactive I had to investigate this rumor for myself. As it turns out it's not a rumor at all. The US EPA acknowledges on it's website that tobacco companies have been using radioactively contaminated fertilizer since the 1950's and this practice continues today. Sadly, regulatory bodies such as the CFIA and the FDA have not stopped the sale of this tainted tobacco. So using science I set out to determine which tobacco brands were the most radioactive, hoping to provide data that could help the public choose "safer" brands. I also engineered a completely novel cigarette filter which helps filter out the radioactively contaminated particles from the cigarette smoke, making smoking safer. Preventive science "cures" cancer.

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000