

# CWSF 2012 - Charlottetown, Prince Edward Island



## Ann Makosinski

### The Piezoelectric Flashlight

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Vancouver Island

**City:** Victoria, BC

**School:** St Michaels University School - Senior

**Abstract:** Creating a flashlight that does not use batteries, chemicals, magnets and minimum of moving parts is quite a challenge. Using a rotating gear, several piezoelectric discs, and an electronic circuit, I was able to generate a continuous 3.3 mW at 2 turns per second, producing a bright, 2.8 ft-candles of light from 9 LED's. The flashlight requires little effort and has only 1 moving part.

### Biography

Hi, my name is Ann Makosinski. I go to St Michaels in Victoria, and am in grade 9. I got the inspiration for my project after I realized that a lot of so called "Eco Friendly" flashlights weren't that friendly in reality. For further investigations, I plan to make my flashlight bigger, quieter, and brighter. I enjoy doing projects that are ecologically related. My advice to future Science Fair participants would be to try to think of something original, because you usually get the most out of it, as you have to learn everything from scratch. Other than experimenting with electronics, I enjoy reading, acting, telling puns, eating cheese, stalking my current obsession(s) on the internet, and editing and directing movies/plays. I have gotten second place in my category in grade 6 for the Vancouver Island Regional Science Fair, first place in grade 7, and this year I got 3rd place overall. I also have won numerous awards (and cash!). My notable experiences in my short life so far has been fainting in basketball tryouts, meeting Joshua Bell, getting a book dedicated to me, eating mealworms, and of course, discovering the world of innovation.

### Awards

### Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$300
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$1 300</b>