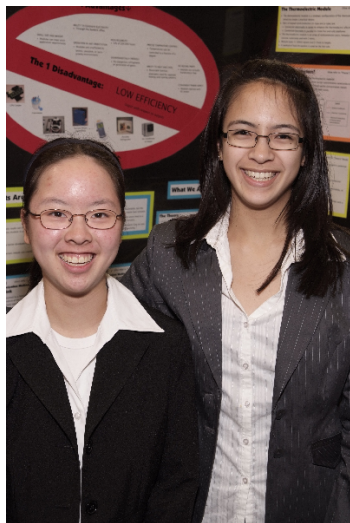


# CWSF 2007 - Truro, Nova Scotia



## Florence Chan

### Thermoelectricity: A Cool Idea Or Hot Air?

**Division:** International / None

**Category:** Intermediate

**Region:** Toronto

**City:** Toronto, ON

**School:** Marc Garneau Collegiate

**Abstract:** The thermoelectric effects, Peltier and Seebeck, involve the conversion between heating/cooling and electricity. Using thermoelectric modules, these effects were explored, demonstrated, and measured. Despite having numerous advantages in society, a low coefficient of performance remains a setback. Existing solutions were studied. Additionally, an innovative solution, involving effective management of waste heat, was proposed.

### Biography

My name is Florence Chan. I am in grade 10 at Marc Garneau Collegiate Institute. My favourite subjects are Science and Math. In the Toronto Sci-Tech Fair 2006, I received a gold medal and the Science Teachers Association of Ontario Award. I have performed well in many math competitions hosted by the University of Waterloo and the University of Toronto. In the Canadian Open Mathematics Challenge, I was on the Canadian Honour Roll. I was invited by the Canadian Mathematical Society to attend the 2007 National Mathematics Camp. As well, I have a strong interest in music. I have won awards in piano competitions, such as the Kiwanis Music Festival and Contemporary Showcase. I was selected as a student performer for the 2005 World Piano Pedagogy Conference in California and the 2007 Music Teachers National Association Conference in Toronto. I am working towards an ARCT Performer's diploma. My hobbies include solving the Rubik's Cube and creating websites, and I am a dedicated Harry Potter fan. At school, I am the president of the Rubik's Cube Club. In the community, I volunteer at the school library, the local hospital and the YMCA. I hope to have a career in medicine.

### Awards

### Value

Discovery Channel Math Award Sponsor: Discovery Channel	\$750
The University of Western Ontario Scholarship Gold Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
Gold Medal - Physical & Mathematical Sciences - Intermediate Sponsor: Encana Corporation	\$1 500
<b>Total</b>	<b>\$4 250</b>