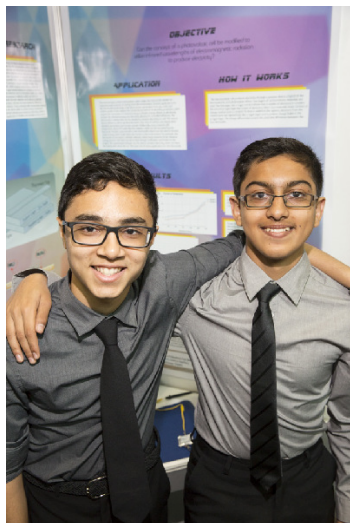


# CWSF 2015 - Fredericton, New Brunswick



## Karthik Prasad, Abhinav Boyed

### Thermovoltaics: Powering the Future

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Peel

**City:** Mississauga, ON

**School:** Glenforest S.S.

**Abstract:** The thermocell is a thermovoltaic device that acts similarly to a solar panel but produces electricity through infrared radiation instead of visible light. It consists of a p type and n type semiconductor separated by an electron junction to produce electricity. The n type semiconductor is sulfur while the p type semiconductor is zinc oxide. Together, these two make up our innovation, the thermocell.

### Biographies

**Karthik** - My name is Karthik Prasad. I am a grade 9 student and I attend the International Baccalaureate Program at Glenforest Secondary School in Mississauga, Ontario. I am deeply in love with science and that has led me to the science fairs. Last year, I placed third in the peel region with an ion propulsion device and this year we came first with a project about Thermovoltaics. Therefore, we are selected to participate in the Canada Wide Science Fair. Other hobbies of mine include Dancing and Soccer. I play for a club and have been playing soccer for 5 years. Soccer and Science are my two favourite things. Additionally, I play chess and have a profe...

**Abhinav** - My name is Abhinav Boyed and I am a 15 year old from Mississauga, Ontario. I attend Glenforest Secondary School and am part of the IB program. I am passionate about science and music. I am creative and in my leisure time I have built a Solar Car, Sterling Engine, RC Hovercraft and Solenoid Engine. My partner and I have got our inspiration for this project while learning about solar panels in science class. We acknowledge the great benefits that accompany a cell that requires no maintenance and can run continuously with no moving parts. However, the fact that solar panels can run only during the hours of daylight, makes it a less appealing inv...

### 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