

# CWSF 2011 - Toronto, Ontario



## Daniel Larsen

### Transformer Efficiencies

**Challenge:** Energy

**Category:** Senior

**Region:** Prince Edward Island

**City:** Belfast, PE

**School:** Charlottetown Rural H.S.

**Abstract:** A circuit was created that charges battery cells in series and discharges them individually in parallel. This can provide a similar decrease in voltage to a charging transformer, eliminating the need for an external charger and allowing for more efficient charging of batteries. The efficiency of one cell of the circuit was shown to be 96 percent.

### Biography

I am a grade eleven student at Charlottetown Rural High School in Charlottetown, Prince Edward Island, and live in the community of Belfast, Prince Edward Island. I am currently in the International Baccalaureate diploma program. The area of research that I most enjoy is electricity. I also take pleasure in areas of research that address problems related to ways of managing of the environment. I do a lot of work with computers, but not as an area of research. I also like to travel. This is my second appearance at the Canada Wide Science Fair. I volunteer as a counsellor with a boy's youth program in Charlottetown. I plan to study electrical engineering in university.  
Daniel Larsen

### Awards

### Value

Excellence Award - Senior - Bronze Medal Sponsor: Youth Science Canada	\$300
The University of Western Ontario Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Western Ontario	\$1 000
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
<b>Total</b>	<b>\$2 300</b>