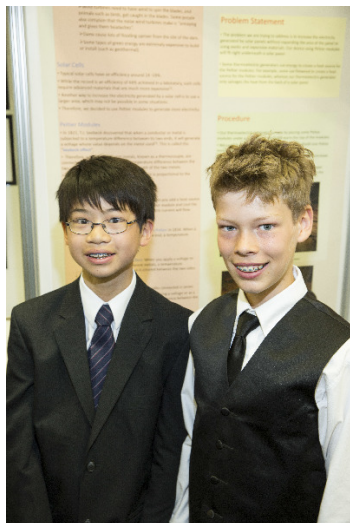


CWSF 2014 - Windsor, Ontario



Nathan Pilkey, Alex Chan

Peltier Power: Scavenging Heat From Solar Panels to Generate Electricity

Challenge: Energy

Category: Junior

Region: Frontenac, Lennox & Addington

City: Kingston, ON

School: Calvin Park P.S.

Abstract: Our goal was to increase the electricity generated by solar panels without using expensive materials or increasing the area of the panels. By putting Peltier modules under a solar panel to harvest the heat and cooling the other side of the modules by circulating water, we were able to get from the modules an extra amount of electricity similar to that of the solar panel.

Biographies

Nathan - My name is Nathan and I attend the challenge program at Calvin Park PS. I am in grade seven and some things that I like to do include running, soccer, badminton, volleyball and hockey. Some of my achievements that I am very proud of include: running at Ontario cross-country championships, winning second overall at my regional science fair and being able to attend the Canada Wide Science Fair. One of my favourite things to do with my family include: playing with my puppy Lucy, going hiking in the White Mountains, and going on canoe trips. I got my inspiration to do my project watching the Jimmy Fallon tonight show, where a girl made a flash I...

Alex - My name is Alex Chan and I am in Grade 7. I'm currently in the Challenge Program at Calvin Park Public School in Kingston, Ontario. I am 13 years old. My favourite quote is "Do not go where the path may lead, go instead where there is no path and leave a trail." by Ralph Waldo Emerson. The sports I play include: badminton, soccer and hockey. I was always interested in renewable energy and I wanted to increase the electricity generated by a solar panel.

Awards

Value

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|---|----------------|
| Challenge Award - Energy - Junior Sponsor: Youth Science Canada | \$500 |
| Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada | \$700 |
| Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University | \$4 000 |
| Total | \$5 200 |