CWSF 2017 - Regina, Saskatchewan

Murron McCafferty

Power of the Sun

Challenge: Energy
Category: Junior
Region: Renfrew County
City: Petawawa, ON
School: Pine View P.S.
Abstract: The purpose of this project was to design an efficient solar water heater. My research identified a variety of designs to achieve this task. I adopted a simplified design where an electrical powered pump recirculated water through coils of tubing exposed to the sun. My initial design was not efficient but my revised design efficiently heated a bucket of water using solar energy.

Biography

My name is Murron McCafferty. I live in Petawawa Ontario and I go to Pine View Public School. I am a member of the student council for my school and 638 Algonquin Royal Canadian Air Cadet Squadron. I enjoy playing hockey and running. I got my inspiration for my solar heating panel when I was asked to go and water the plants in our back garden. I noticed the water in the hose was very warm after being left out in the sun all day. I wondered how much heat I could get from the sun by recirculating water through a long tube exposed to the sun. After building and testing my prototype solar water heater, I have established that it is possible to efficiently heat water using power from the sun. I would next like to build a full size solar heater and use it to heat my swimming pool and save on propane. My advice to other students is to think long and hard about your topic and research it before starting to build or experiment.