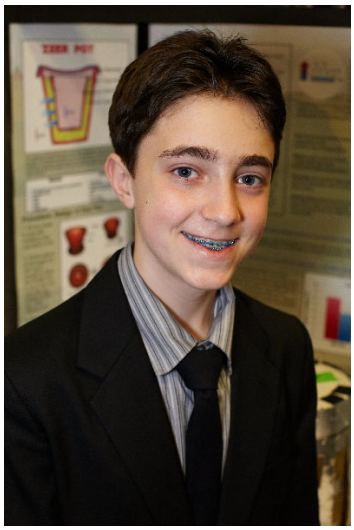
CWSF 2012 - Charlottetown, Prince Edward Island



Conor Mulcahy

Battle of the Ecofridges: Traditional Zeer Pot vs. Scrap Metal Fridge

Challenge: Innovation
Category: Junior
Region: Ottawa
City: Ottawa, ON
School: Hawthorne P.S.
Abstract: Evaporative cooling can be harnessed to provide refrigeration for people without access to electricity. Traditional zeer pots layer wet sand between nested clay pots, with the inner pot chilling as heat energy is removed by evaporation. I built and tested both a zeer pot and a newer scrap metal version, to compare their potential for simple, sustainable refrigeration and further innovation.

Biography

I've always loved construction toys such as LEGO, and after reading an article about evaporative cooling and sustainable eco-fridges, I was inspired to build my own in order to assess the possibility of improvement upon the existing designs. I found it remarkable that this concept has been known and utilized for centuries, and yet very few people have ever heard of it. What I enjoy about science, and engineering in particular, is that it's not just about new discoveries, but also about improving upon existing ideas. I am convinced that sufficient scope remains to improve sustainable eco-fridges, and I will continue to explore that possibility. This project has certainly served to rekindle both my interests in engineering and those of global citizenship. I'm currently in the gifted stream at my local elementary school, and due to start high school in an International Baccalaureate program later this year. Outside of school, I enjoy both the visual arts (enrolled in a portfolio development class) and sports (playing competitive badminton and soccer). Although my career plan is still evolving, I am certain that it will involve science and technology.