

March 29, 2011

Dear Mr. Weidhaas,

My Name is Calvin Rieder and I'm in Grade 8 at Oakville Christian School. I participated in the 2011 Bay Area Science and Engineering Fair (BASEF) held at Mohawk College from March 24-26, 2011.

I was the recipient of the American Society for Quality (ASQ) – Hamilton Section Award sponsored by your organization. I would like to thank you for my award and your support of this year's fair.

My project was titled "Water Water Everywhere Nor Any Drop to Drink" – Atmospheric Water Condensers to Provide Pure Drinking Water, Part 2. There is a worldwide water crisis in which one billion people do not have access to safe drinking water. The purpose of my project was to try to help with this crisis. The atmosphere contains 27 million litres of water for every person on earth, a certain percentage of which returns to earth at night by condensation in the form of dew. Last year I designed and constructed prototype atmospheric water condensers to provide drinking water from this potential source. After BASEF I won awards at the Canada-Wide Science Fair with that project. This year I have continued development of atmospheric condensers that could work in more real-life situations. I constructed an aerodynamic condenser and demonstrated that its water yield was increased. In addition, I developed a working model that condensed atmospheric water when upright and covered to protect the surfaces from particulate contamination. I also designed windcatchers which could divert water vapour-containing air from the prevailing winds into the condenser and showed that the velocity of the air in the condenser approximated the optimal velocity for dew formation. Finally, I carried out experiments in which I modified the condenser surfaces to see if the flow rate could be improved and I examined various environments to determine if condenser location could effect water yield.

I have learned a lot from doing this project. I have learned that, even if you have good idea and evidence shows that your hypothesis is correct, it takes a lot of trial and error, persistence and hard work to make progress. Although this work has been very time consuming and required a lot of thought, I feel that it has been worth pursuing. In doing a continuation project, it is very satisfying to see the development of my innovation.

I enjoyed sharing my ideas with the judges at BASEF and I really appreciated their interest and their suggestions. I plan to use their advice for the Canada-Wide Science Fair. My experience at BASEF last year was a passport to the Canada-Wide Science Fair, TEDx Youth@Toronto and the Engineers Without Borders National Conference. My experience this year at the Fair has given me further confidence in my abilities and has helped me to realize that I would like to study engineering at University but, before that, I hope to enter BASEF again.

Again, thank you very much. Please consider continuing your corporate sponsorship of BASEF again next year.

Sincerely,

Calvin Rieder.

A handwritten signature in blue ink that reads "Calvin Rieder". The signature is written in a cursive style with a large initial "C" and "R".