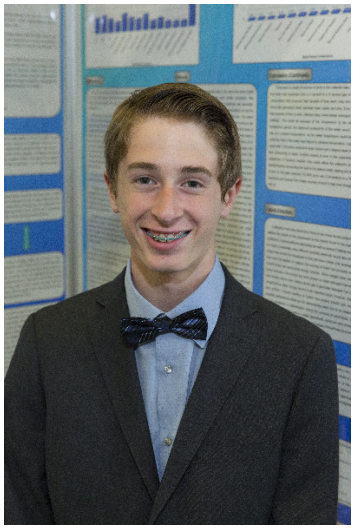
CWSF 2018 - Ottawa, Ontario



Adam Patton

The Power of Water: Finding Alternative Electrodes for Hydrogen Production

Challenge: Energy
Category: Intermediate
Region: Cariboo Mainline
City: Kamloops, BC
School: St Ann's Academy

Abstract: The goal of this project was to test alternative metal electrodes and their ability to split water into hydrogen and oxygen rather than using costly platinum electrodes. These gases, specifically hydrogen, can be used to make 100% clean and renewable energy in hydrogen engines and hydrogen fuel cells. Alternative metals would lower the cost of generating hydrogen fuel, saving hydrogen manufacturing companies valuable money.

Biography

This project comes from a two year renewable energy study. Last year I wanted to see if I could increase the electrical output of bacteria by adding sugary additives. My results concluded that bacteria were not a stable source of power. I did make it to CWSF last year (2017), but I ended coming up short of my goal at CWSF. With this said, I decided to look further into renewable energies, specifically hydrogen. I found that the current cost of electrodes used in the generation of hydrogen fuel was very expensive, so I decided to find a different metals that could be used in the process of electrolysis. I would say that science fair is an important part of today's society. Science fair is where it all starts, with some of the best ideas coming out of a youth's science fair project. To all of those considering doing a science fair project, I strongly encourage you to do this. It may be a lot of work, but the outcome will be worth all of the hours you will put into your project. I would like to further my studies into renewable energies in the years to come.

Awards	Value
Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Challenge Award - Energy - Intermediate Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 000