

CWSF 2012 - Charlottetown, Prince Edward Island



Christoph Vetter

Can Tires Provide an Alternative to Furnace Oil?

Challenge: Innovation

Category: Senior

Region: Strait

City: Grand River, NS

School: Richmond Academy

Abstract: My project involves the development of a device to produce tire pyrolysis oil (TPO) by recycling scrap tires and used motor oil. The research and development of my apparatus provides insight into how TPO production and usage would be useful as a furnace oil alternative and environmentally friendly in that it recycles petroleum based waste.

Biography

My name is Christoph Vetter and I am currently enrolled at Richmond Academy in Louisdale, Nova Scotia. I have a strong passion for hands on work, biology and the environment. I feel that it is our responsibility to preserve nature and reduce consumer waste output. One of the most prevalent types of waste products that I see locally are petroleum-based. Through research, I discovered that companies in China are using pyrolysis to produce a furnace oil alternative. It all seemed very appealing to my desire of engaging in a hands on project that required constructing my own unique mechanism to produce TPO and to then see how this oil would compare with normal furnace oil in terms of combustion potential. The project required commitment, but it was really neat to see the mechanism evolve through parts gathered from the local junkyard. Seeing your own theoretical visualizations come to life as you put parts together piece by piece is a great learning experience and I strongly recommend for anyone who has a passion for engaging in a project which they will have fun completing to enter the science fair, as hands on research is the best way to learn.

Awards

Value

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| S.M. Blair Family Foundation Award - Senior Sponsor: S.M. Blair Family Foundation | \$1 000 |
| Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada | \$1 500 |
| Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science | \$5 000 |
| UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver) | \$4 000 |
| University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba | \$5 000 |
| University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa | \$4 000 |
| Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University | \$4 000 |
| Total | \$24 500 |