

CWSF 2013 - Lethbridge, Alberta



Nicole Schmidt

Double Bubble, Boil and Trouble

Challenge: Discovery

Category: Junior

Region: Calgary Youth

City: Calgary, AB

School: F. E. Osborne School

Abstract: Researching the process of cavitation by altering the liquid conditions that impact the stages of bubble formation and implosion; and experimentation with the toroidal bubble phase. The liquids are changed thermodynamically and by varying viscosity and density through the addition of NaCl. To apply the components of the Rayleigh-Plesset equation to further understand the dynamics of cavitation bubbles in different liquid conditions.

Biography

My name is Nicole; I am a junior-high student from Calgary. I really love science because it opens worlds of discovery and application. This is my first Canada-Wide Science Fair and I have participated in three Calgary Youth Science Fairs. My past projects have been on fluid dynamics, which I find both intriguing and challenging. This year I furthered my knowledge of fluid mechanics, by investigating cavitation. I love the performing arts: drama, guitar and dance. At school, I am involved in yearbook and directing the musical production. Writing, sculpting, and illustrating are how I spend free time. In the past, my art has been featured on two magazine covers and in a museum. I believe art is a great tool for teaching science. I learned about this connection when I created a science poster illustrating different types of energy production. This poster was awarded first-place at the "North American Air and Waste Water Management Conference". In the future I hope to have a PhD and become a science photographer. I am ecstatic to be attending the Canada Wide Science Fair. This is a wonderful opportunity to promote science to Canadians and encourage youth to pursue their curiosity.

Awards

Value

Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	\$300
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 300