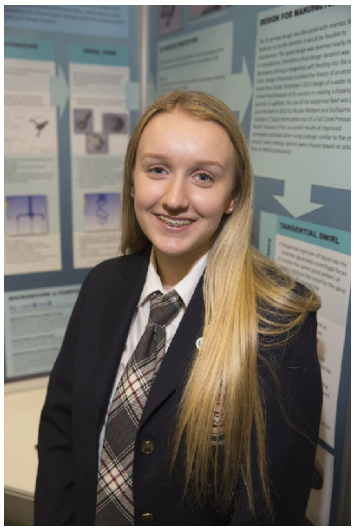
CWSF 2016 - Montreal, Quebec



Zoey Jones

Water Saving Shower Head: Multi-iterative Design Incorporating Atomized Flow

Challenge: Innovation
Category: Intermediate
Region: Greater Vancouver
City: Coquitlam, BC
School: Stratford Hall

Abstract: The goal for this project was to multi-iteratively create a water-saving shower head incorporating an atomized flow. Computational Fluid Dynamics simulations were completed using ANSYS CFX to simulate multi-phase flows out of shower head designs drawn in Autodesk Inventor. A final design was reached, and this design was moved into physical prototyping and later manufacturing. The goal flow rate of below 2.5 LPM was achieved.

Biography

My name is Zoey Jones, and I am a grade 10 student at Stratford Hall in Vancouver. Aside from my interest science, I am an actress, competitive swimmer, and horseback rider. I am also very passionate about world-wide issues, which I why I decided to try to tackle the issue of water scarcity with my project this year. Creating a water saving shower head using computational simulations in a combination with physical prototyping was a rewarding experience. I hope to move my design into full manufacturing and provisional patenting. This is my first year at CWSF, and I would recommend science fair to anyone who is passionate. It takes dedication, but the whole process is extremely worth it.