

# CWSF 2016 - Montreal, Quebec



## Katie Brent

### At A Measured Step: An Orthopaedic Pressure-Based Rehabilitative Insole

**Challenge:** Innovation

**Category:** Senior

**Region:** Bay Area

**City:** Oakville, ON

**School:** Notre Dame S.S.

**Abstract:** My project involved the creation of an insole that is able to help injured or post-operative individuals adhere to the graduated weight-bearing regimen that a physician prescribes. In order to do this, I used electronic components to measure applied pressure on the foot, in turn transmitting it to an Android application that I wrote. The application provides both visual and tactile feedback for the patient.

#### Biography

I am a seventeen year old grade twelve student, and I am very privileged to be taking part in my fourth Canada Wide Science Fair. For the past six years, I have participated in my regional science fair, and have had many positive experiences. I was inspired to create my project this year so that I could learn more about computer hardware and software's implications in the healthcare industry. I wish to expand on my project in order to make my innovation even more customised to a patient's needs. To students thinking about doing a project, I say to pursue it. Although the process is time consuming, the things you learn and the friendships you form make it an incredibly worthwhile experience! I have a great affinity for learning, with a particular love of the sciences. I also, however, thoroughly enjoy the arts. I am an active part of my school's trivia team, Student Council, and Student Senate as well. Outside of school, I pursue other interests such as visual arts, dancing, and travel. I hope to travel to many countries and experience diverse cultures. This fall, I am excited to be undertaking a science or engineering degree at university.

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$8 500</b>