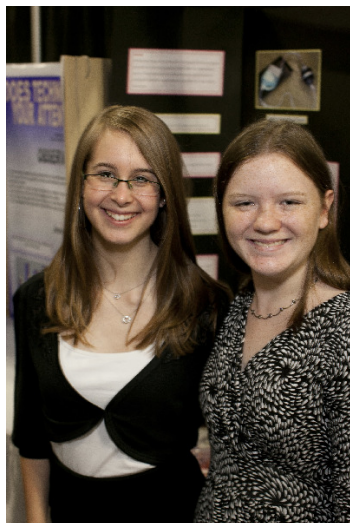


# CWSF 2011 - Toronto, Ontario



## Caitlin Doherty, Vicki Kleu

### Pumping Plaque; Reducing Arterial Turbulent Flow Through External Stents

**Challenge:** Health

**Category:** Intermediate

**Region:** Vancouver Island

**City:** Victoria, BC

**School:** , Lambrick Park Secondary

**Abstract:** Utilizing plastic tubing and an accordion pump, we investigated if varying stent type and stent placement could reduce turbulence in arteries subjected to additional plaque deposits. Through videotaping and calculating Reynolds numbers we showed that external stents significantly reduced turbulence and could become a major medical improvement.

#### Biographies

Caitlin - My name is Caitlin Doherty and I am in Grade 8 at Gordon Head Middle School. I love animals, singing, theatre and swimming. I have a dog named Ladybug and have volunteered in the past at the SPCA. I have been with the Victoria Youth Musical Theatre Society as well as, the District 61 Honour Choir for three years. At school I participate in leadership, choir and musical theatre. As I was growing up I spent most of my time singing and swimming at the Y. I have been taking vocal lessons for three years.

Vicki - My name is Vicki Kleu and I am 14 years old. I was born in South Africa and relocated to Victoria, BC when I was ten years old. While in South Africa I participated in ballet and modern dance. I currently take ballet and hip hop. Last year, I was leadership chair of my middle school. Last year I also sang in my school choir and had a minor role in our musical "Grease". I volunteer weekly at a neighboring school. I'd like to be involved in dance, medicine, and teaching when I'm an adult. This is my third time participating in a science fair and my first time attending the CWSF.

#### Awards

#### Value

The Actuarial Foundation of Canada Award - Intermediate	\$750
Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$700
The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
<b>Total</b>	<b>\$3 450</b>