

# CWSF 2014 - Windsor, Ontario



## Katie Brent

### Telemetric Vest: Wearable Computing for Patient Welfare

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Bay Area

**City:** Oakville, ON

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

**Abstract:** It is often difficult to monitor the wellbeing of people with illnesses and disabilities. This issue is especially prominent in an aging society. To solve this problem, I used a wearable LilyPad Arduino and sensors to construct a garment that, using a Macbook application that I created, monitors parameters relevant to a patient's welfare. Parameters measured are ambient temperature, light level, patient position, and location.

#### Biography

I am a fifteen year old grade ten student. I have participated in the Bay Area Science and Engineering Fair for four years, and this is my second time participating in the Canada Wide Science Fair. I am honoured to have this amazing opportunity. In school, my favourite subjects are science and math, but there isn't a subject that I don't like. In my spare time, I like to paint, curl and play badminton to name a few activities. During the summer, I enjoy hiking, fishing and swimming at my cottage in northern Ontario. I also enjoy travelling- I have been to Alberta, Québec, New Brunswick and Prince Edward Island. Inspiration for this project came when I learned of some of the complications that modern day society is faced with due to our aging population and the prominence of degenerative diseases. I wanted to find a way to help both caregivers and patients. Future steps in this project include adding more sensors to cater to a greater number of conditions. For someone considering a science fair project, I would say go for it- science is everywhere, and it's not hard to find science in a subject that interests you.

#### Awards

#### Value

Australian National Youth Science Forum Award	\$2 500
Excellence Award - Intermediate - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$100
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$3 600</b>