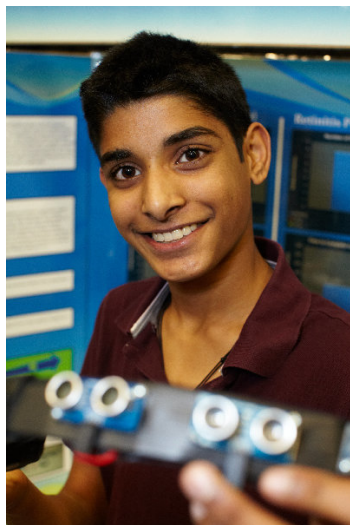


# CWSF 2012 - Charlottetown, Prince Edward Island



## Alexander Deans

### iBELT: Training the Ear to See!

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Windsor

**City:** Windsor, ON

**School:** Academie Ste. Cecile International

**Abstract:** An inexpensive novel, user-carried device (iBELT) was created to map the visually impaired user's environment using four ultrasonic sensors. Distances to obstacles were converted to audible frequencies, forming a "sound map". Twenty volunteers and a retinitis pigmentosa patient were tested on an obstacle course while navigating blindly, with one sensor, and the iBELT. The iBELT improves safety and speed, and is the most efficient device.

### Biography

My name is Alexander Deans, and I am in Grade 9 at Academie Ste. Cecile International School, Windsor, ON. I love playing many sports, including soccer, hockey, tennis, volleyball, sailing, and skiing. I also play the acoustic guitar and piano. I enjoy working with animals, and I have a bearded dragon. I recently competed in the International Children's Games in Kelowna, B.C., against youth from over 14 countries around the world!

### Awards

### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	\$700
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$2 700</b>