

# CWSF 2014 - Windsor, Ontario



## Ethan Milne

### Ped-E-Board

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Avon Maitland-Huron Perth

**City:** Goderich, ON

**School:** Goderich District Collegiate Institute

**Abstract:** An accurate weight of a child can be of critical importance for paediatric resuscitations. A study showed the gold standard Broselow Tape (BT) had >10% error more than half the time. I created a spine board with a digital scale (Ped-E-Board). My validation study demonstrated it was just as accurate as a pediatrician's scale and more accurate than the weight estimated by the BT.

### Biography

I was inspired to create the Pediatric Electronic Board (Ped-E-Board) after reading a validation study showing the Broselow Tape (BT) was not accurate and under-estimated the weight of children. This could lead to the under resuscitation of critically ill or injured children. I thought, why not just weigh the child rather than estimating it based on their length? To do this I created a pediatric spine board (Ped-E-Board) which could safely determine the actual weight of a child. I hope to obtain a patent. The next step will be to construct a waterproof model out of plastic and test it in the emergency department. I plan on becoming a doctor and also doing medical research. My favourite things to do are: Watching The Simpsons and Doctor Who, playing on my iPad, and reading books by Richard Dawkins, J.K. Rowling, and Douglas Adams. I play the violin and the guitar, as well as taking musical theory lessons. I am currently advanced 1 grade in both math and english at my school. Some advice for future people doing science fair is this: Don't panic, have fun.

### Awards

### Value

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>\$1 100</b>