

# CWSF 2016 - Montreal, Quebec



## Sophie Fraser

### Common Sensors: Impact Sensors for Helmets

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Annapolis Valley

**City:** Falmouth, NS

**School:** King's-Edgehill School

**Abstract:** The purpose of this project was to create and test an impact sensor for helmets which can be used as a tool to show the location of the impact and the relative force of the impact in order to help with the assessment, diagnosis and appropriate treatment of concussions. Presently, there are no location specific impact sensors on the market, surprising considering its importance.

#### Biography

I am a grade 8 student at King's-Edgehill School, where I play on their varsity hockey team. I chose to do this project because I am a competitive athlete and I was interested in learning about ways that I could improve my reaction time before participating in athletic events. I am also interested in human physiology and hope to one day become a doctor. In further investigations I may measure the heart rate of the test subjects while they are doing exercise and look at other factors that could affect reaction time. If you are thinking about doing a science fair project, I would suggest doing it on something that you are passionate about or something that you are interested in learning about because it will make doing your project much more enjoyable.

#### Awards

#### Value

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