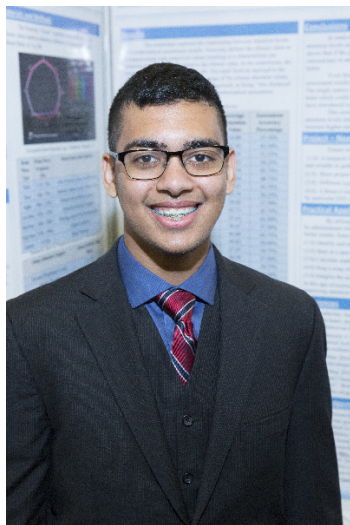


# CWSF 2018 - Ottawa, Ontario



## Fawzan Hussain

### Use of EEGs to Analyze Student Attention during Math Assessment

**Challenge:** Health

**Category:** Intermediate

**Region:** South Fraser

**City:** Surrey, BC

**School:** Fraser Heights Secondary

**Abstract:** The objective of this project is to quantitatively measure participants' attention with Neurosky's Mindwave (a commercial EEG) during a math assessment and assess the relationship between the participants attention and their scores. If student's attention levels are maintained at a high level throughout, students will score a high score on the assessment. Administering assessments during maximized attention levels can yield better results for student success

#### Biography

Fawzan Hussain is a Grade 10 student at Fraser Heights Secondary School in Surrey, British Columbia. He is an active member in his school and community through Student Council, Model United Nations, and volunteering with City of Surrey and Surrey Arts Centre. Fawzan created and leads 'FH Youth for CARE', a school club which donates Hygiene/Art Kits, raises awareness, and supports Surrey Memorial Hospital while engaging youth in his community. Fawzan has always been passionate about technology. From Python programming and Raspberry-Pi to 3-D printing, Fawzan is fascinated with designing practical technology applications such as creating 3-D printed assistive devices for people with disabilities. Fawzan is also a Black Belt in Sun Hang Do martial arts. While talking to his friend, Fawzan came to know that his friend was distracted and did not do well in his math exam. For his project, Fawzan decided to investigate whether a better test outcome is possible with increased attention levels, which can be measured with an EEG. In the future, he plans to use an extensive EEG headset, a wider range of assessments and a bigger sample size. Fawzan encourages others to follow their passion when picking a science fair project.

#### Awards

#### Value

Excellence Award - Intermediate - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
<b>Total</b>	<b>\$1 000</b>