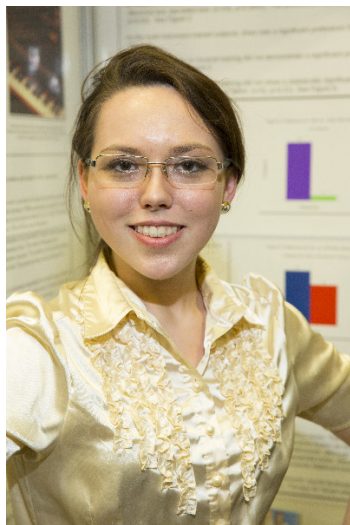


CWSF 2014 - Windsor, Ontario



Emily Lind

The Piano Tuner's Dilemma

Challenge: Discovery

Category: Senior

Region: Peterborough

City: Brighton, ON

School: East Northumberland S.S.

Abstract: Pitch preference in adolescents was explored using the C major chord, versus a +/- 5Hz variance in individual notes within the chord. The results indicate a significant preference for the established pitch stimuli. Subjects who preferred off-pitch stimuli demonstrated a significant preference for frequency-flattened stimuli. Analysis of subjects who had multi-instrument training was also performed, demonstrating similar results.

Biography

Emily Lind is a grade eleven student at East Northumberland Secondary School. She participates in numerous extra curricular activities, including various music instruments and competitive Highland Dancing. In 2012, Lind took part in a school trip to commemorate the 95th anniversary of the Battle of Vimy Ridge. She plans to travel Europe again this year to commemorate the 65th anniversary of D-Day. Lind's science project was inspired by conversations with her violin and guitar teachers, who mentioned how some instruments are set to be slightly out of tune in order to give them a distinct sound. Her project, entitled Pitch Perception in Adolescents, found statistically significant evidence that, while on-pitch stimuli is preferred, a vast majority of individuals favour pitch-flattened stimuli. Further areas of expansion on this study could include music production and hearing-aid manufacturing, as well as being of possible use as therapy for children with autism. Lind plans to pursue a career in medicine. The greatest advice that she can offer students who plan on entering science fairs is to think outside of the box, and to take inspiration from your interests in art or sports in order to find creative questions to address scientifically.

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$100
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$2 100