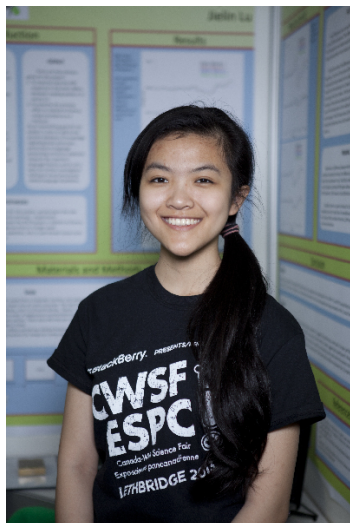


# CWSF 2013 - Lethbridge, Alberta



## Jielin Lu

### Effects of Language Fluency and Priming: An EEG Study

**Challenge:** Health

**Category:** Senior

**Region:** Niagara

**City:** St.Catharines, ON

**School:** Sir Winston Churchill

**Abstract:** Response to words in the first language is generally faster than the second language, due to our brains being better primed to the first language (more repetition of seeing these words). Using EEG analysis, this project examines an individual's brainwave patterns during a word classification task and its correlation to their level of language fluency, to find an objective measure for fluency.

#### Biography

My name is Jielin Lu, I am currently a grade twelve Extended French student at Sir Winston Churchill Secondary school in St. Catharines, Ontario. There, I peer tutor, and am a member of Teens for Change, robotics, MOSAIC, school newspaper, and yoga club. Outside of school, I play the violin, badminton, and volunteer as part of many community groups such as the Mayor's Youth Advisory Committee (MYAC) and the TO2015 Pan/Parapan American Games YAC, working with other members to promote youth engagement. Post-secondary, I plan to attend university, pursuing studies in the field of science. I was inspired to do this project as I have always been fascinated by the field of neuroscience and how the brain works. As a multilingual speaker (English, Chinese, French) and someone passionate about learning new languages, I was also curious to know how these two fields could connect. As further investigation, the plan is to see how the findings can be extrapolated to other visual-based language processes. My advice to students thinking about doing a project is to find a topic which interests you: you will have fun doing your research, and it will be truly exciting to get results for your hard work.

#### Awards

#### Value

Excellence Award - Senior - Silver Medal Sponsor: Youth Science Canada	\$300
Dalhousie University Faculty of Science Entrance Scholarship Senior Silver Medallist - \$2500 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$2 500
UBC Science (Vancouver) Entrance Award Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$2 000
University of Ottawa Entrance Scholarship Senior Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Ottawa	\$2 000
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$8 800</b>