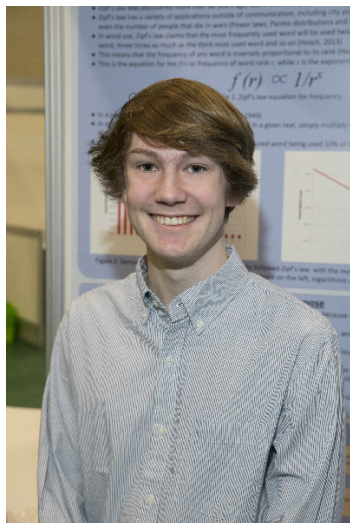


CWSF 2017 - Regina, Saskatchewan



Caleb Lammers

Zipf's Law Tested Across Age Groups

Challenge: Discovery

Category: Intermediate

Region: Northwestern Ontario

City: Thunder Bay, ON

School: St. Ignatius S.S.

Abstract: The project examines which age groups' speech patterns follow Zipf's law. The results were that teenagers follow Zipf's law closely, using their most used words frequently and decreasing word usage fairly rapidly. Adults use their most used words less than Zipf's law would predict and decrease usage slower than Zipf's law predicts. Children use their most used words more frequently, and also decrease slowly.

Biography

Caleb Lammers is a Grade 10 student at St. Ignatius High School in Thunder Bay, Ontario where he enjoys Science, Math and other subjects. He plays tight end on the high school football team and competes in track and field. Caleb is also an avid snowboarder and he enjoys spending time with friends and family. Caleb's idea for his science fair project arose out of his interest in linguistics. After reading about Zipf's law, Caleb noticed that the majority of the studies pertained to adults; and so he decided to conduct a comparative study across age groups. The project was extremely labour intensive, involving many hours of interviews, transcribing and data analysis. The project received such high praise from the Northwestern Ontario Regional Science Fair judges that Caleb is planning to expand his application of Zipf's law to various forms of writing. Caleb's advice to other science students would be to work hard at developing your own ideas, make use of all available resources and don't give up no matter what obstacles you encounter. He adds that participating in the science fair has been an awesome learning experience that has motivated him to pursue post-secondary studies in a science-related field.

Awards

Value

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