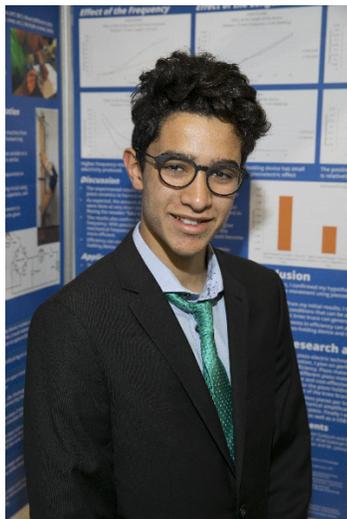


CWSF 2017 - Regina, Saskatchewan



Yassin Guitouni

The KNEEd for Power: Harvesting Biomechanical Energy

Challenge: Innovation

Category: Intermediate

Region: Vancouver Island

City: Victoria, BC

School: Mount Douglas Secondary

Abstract: In my project, I tried to harvest energy from human motion. I did this by building a knee brace that uses piezoelectric elements and the force of the knee to generate electricity. Then, I made some adjustments to the speed of movement as well as to the knee brace and measured the energy produced. I built a wooden leg to conduct my experiments.

Biography

My name is Yassin Guitouni, I am 14 years old and a grade 9 student at Mount Douglas Secondary School in Victoria, BC. I am born in Quebec City, but my parents are both from Tunisia. I speak French, English and Arabic fluently. When I was in grade 6, I lived in Tunisia for 6 months where I attended the International School of Carthage and experienced a European-style schooling system. I love travel and discovering new cultures. I enjoy participating in math competitions such as the Gauss and Pascale. I am also very athletic and active person. I play soccer and track and field competitively, and enjoy basketball, football, snowboarding and other sports for fun. Also, up until last year I swam competitively (reaching provincials) with Pacific Coast Swimming club, Provincial champions for the last 5 years. I have been doing science fair on my own initiative for 4 years now and I really enjoy doing it. It is my passion for sports that inspired me to explore ways to harvest energy from the human body movements. This is going to be my first trip to Canada Wide Science Fair and I hope it will not be my last.

Awards

Value

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|---|---------|
| 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 |