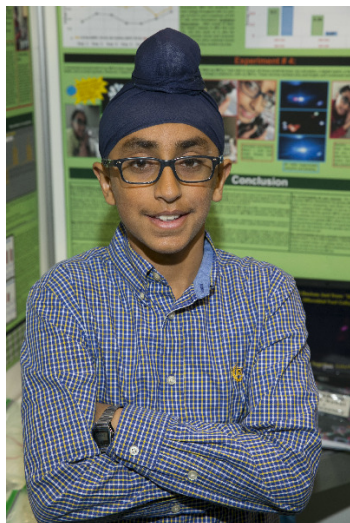


CWSF 2017 - Regina, Saskatchewan



Jodh Singh Nahal

Powering My Small Devices From Soil Bacteria Using MFCs (Microbial Fuel Cells)

Challenge: Energy

Category: Junior

Region: Cariboo Mainline

City: Kamloops, BC

School: Dufferin Elementary

Abstract: My project-Experiment#1: Comprehensive experiment with 64 one-chamber MFCs to study the affects of various combinations of 128-electrodes on the voltage production of MFCs. Experiment#2: Built three-MFCs with different substrates-(topsoil,saliva,urine) to study the affects of 'substrates' on the voltage production of MFCs. Experiment#3: Built three-MFCs in garden itself to investigate if garden MFCs produce more voltage. Experiment#4: Powered some of my small-devices using MFCs.

Biography

I'm Jodh Singh Nahal; in grade 7. In grade 4, I ranked #1 in Canada in a Canadian national-level math contest- Mathematica Centrum Byron-Germain. I scored 100% and got two medals. I was the only one from BC who made it to nationals and became the Canadian champion. I made news on the front full-page of the newspaper- Kamloops This Week. In grades 5-6, I got two medals for: regional winner in a math-contest. In grade 6, at the regional science-fair, I got two best-category awards and a cash-prize. This year; in grade 7, I got four best-category awards and two cash-prizes, and making it to the CWSF is amazing. I play select soccer for three years now, and got 'MVP of the tournament' medal last-year in Kelowna. I play basketball, flag-football for my school-team, and have couple of achievements in running at the district track and fields. I got the idea for my project from online research, and got so inspired by the fact that electricity can be produced from organic waste. I plan to further investigate other potential applications of MFCs- wastewater treatment, hydrogen production, and desalination. To other students, I would say work hard and stay positive.

Awards

Value

Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000