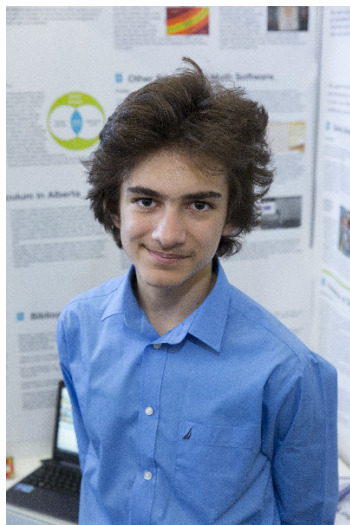# David Popa

Applying User-Centred Design to Educational Math Games

Challenge: Innovation
Category: Junior
Region: Calgary Youth
City: Calgary, AB
School: Louis Riel Elementary Junior High School
Abstract: Using game design and student-learning strategies, I created a computer game to help young students master multiplication. The player advances through the game by answering multiplication questions. My game provides repetition and progressive difficulty, thus helping students gradually strengthen their multiplication skills. However, unlike other software, my design places the user, their characteristics and goals at the core of the design process ensuring engaging fun.

Biography

I was born in Sibiu, Romania. I go to Louis Riel School in Calgary. My hobbies include gaming, back-country skiing, biking, debate and reading. I have participated in my city's science fair for four years, and have won 4 gold medals and 5 awards in total. I am very passionate about biology and medicine, and I am planning on going to medical school. This year, my project idea was inspired when I read about the ineffectiveness of math teaching methods in Alberta, particularly in elementary grades. I wanted to do something about this, so I created a math computer game that draws on game design principles and student learning strategies. In the future, I would like to test my game with more students in order to improve it based on their feedback. My advice for other students thinking about doing a science fair project is to make sure to make detailed plans. This will help guide your project and stay on track. I also believe that students should rehearse their projects, as it will help them present it more comfortably in front of judges, but will also help students understand their project better.

Awards

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