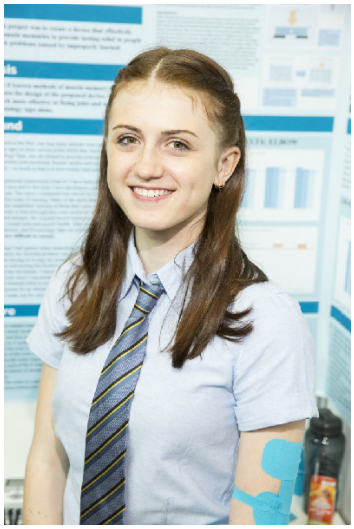
CWSF 2015 - Fredericton, New Brunswick



Willa Pepin

Kinesiology Plus - A Biofeedback Device for Retraining Harmful Muscle Memories

Challenge: Innovation
Category: Intermediate
Region: Greater Vancouver
City: North Vancouver , BC
School: Collingwood School
Abstract: This project improves Kinesiology Tape's ability to correct muscle memory. The tape's properties were harnessed by adding a strip of pressure sensors underneath it. A Lego NXT connected to these sensors was coded to provide warnings when a taped joint was moved past an allowed position. This uses known muscle memory retraining techniques to provide faster, more long-lasting corrections for joint and muscle problems.

Biography
Hello, my name is Willa Pepin. I am a tenth grade students at Collingwood School in West Vancouver. As of this year I have been playing high level volleyball for three years and in said time have developed a shoulder problem, which in fact is the inspiration behind my project, "Kinesiology Plus; a biofeedback device for retraining muscle memories." As shown by the type of project I have chosen to enter this year in the fair, biomedical engineering is a big interest of mine. In terms of the future of my project, I hope to partner with a engineering company to create a much stronger second prototype of my device, that could then be tested more thoroughly. As I believe that this device that I created has the possibility to benefit many people who have the types of injuries I do, I am very eager to continue my work on it. Once piece of advice I have for other students interested in competing in the CWSF is make sure that what you are attempting to do for your project really interests you, the judges love it when they can see the passion you have for your work.

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

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