

# CWSF 2010 - Peterborough, Ontario



## Rylen de Vries

### Jump To It! Force and Stress During Take-Offs in Figure Skating

**Division:** Physical & Mathematical Sciences

**Category:** Junior

**Region:** Winnipeg Schools

**City:** Winnipeg, MB

**School:** River Heights School

**Abstract:** I built a model knee to measure strain on a leg at five different angles. I also tested people jumping at the same angles. I filmed figure skaters in their takeoffs while jumping and measured these angles as well. I incorporated Hooks Law into my findings, which showed there was less stress than would be expected at a 70 degree angle, thus supporting my hypothesis.

#### Biography

I'm in grade eight in a late french immersion program. I'm on my school's student council and the honor role with distinction. I play tenor sax in the concert and jazz band. I compete as a figure skater for Skate Winnipeg, having been in their Starskate program the past two years. This year I competed at the Manitoba Starskate Provincial Championships where I received the silver medal. I also volunteer as a program assistant with the club. I have played piano for the past 10 years and will take the Royal Conservatory of Music grade 7 exam this June. In grade 5 I started to create science fair projects and have received gold medals every year at both my regional and provincial science fairs, as well as various other awards including best junior project. This is my second year at CWSF and I am so honored to again be a part of it. Last year it was in my hometown of Winnipeg, so I am excited that this year I get to go on a trip for it! I like spending time with my friends, computers and gaming. In the future I want to go into science at University!

#### Awards

#### Value

The University of Western Ontario Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: University of Western Ontario	\$2 000
Silver Medal - Physical & Mathematical Sciences - Junior Sponsor: Encana Corporation	\$700
Total	\$2 700