

# CWSF 2017 - Regina, Saskatchewan



## Grant Mansiere

### Why do Aspens Tremble? Adaptations for Self Cleaning and Pest Control

**Challenge:** Discovery

**Category:** Senior

**Region:** Central Okanagan

**City:** Summerland, BC

**School:** Summerland Secondary

**Abstract:** Trembling Aspens showcase unique traits i.e., trembling in wind and hydrophobic leaves, monocultures of clones, and widespread distribution. Monocultures are susceptible to infections and infestations due to their genetic similarity, so why have aspens thrived? Literature review, my wind tunnel and hydrophobicity tests of leaves demonstrate that the hydrophobicity and flutter may offer self-cleaning leaves whose forceful movements could be sufficient to prevent insect infestation.

#### Biography

My name is Grant Mansiere, and I am currently a grade 11 student. I enjoy longboarding, cycling, and keeping busy on small projects. I intend to go to Windsor University, using my two scholarships that I won through CWSF in past years. I saw my project inspiration fluttering in the wind on summer drive, aspen tree leaves. They were fluttering in the wind, and yet I noticed no wind. I had to find out how! So I got to work that summer in advance of the first science fair in March. I borrowed a wind tunnel and made myself a goniometer and started trying to find answers. Those interested in science fair should always be questioning the world around them, because one never knows where the next topics might arise. Also, start as soon as possible. My further investigations may be surrounding a method to collect energy from an artificial aspen leaf flutter.

#### Awards

#### Value

Challenge Award - Discovery - Senior Sponsor: Youth Science Canada	
Excellence Award - Senior - Gold Medal Sponsor: Youth Science Canada	\$250
Dalhousie University Faculty of Science Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: Dalhousie University, Faculty of Science	\$5 000
UBC Science (Vancouver) Entrance Award Senior Gold Medallist - \$4000 Entrance Scholarship Sponsor: The University of British Columbia (Vancouver)	\$4 000
University of Manitoba Entrance Scholarship Senior Gold Medallist - \$5000 Entrance Scholarship Sponsor: University of Manitoba	\$5 000
University of Ottawa Entrance Scholarship Senior Gold Medallist - \$4,000 Entrance Scholarship Sponsor: University of Ottawa	\$4 000
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$22 250</b>