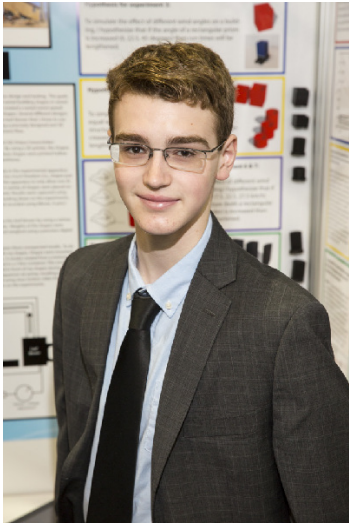


CWSF 2015 - Fredericton, New Brunswick



Dylan Layton-Matthews

Gone With The Wind: An Experimental Apparatus For Building Response To Wind

Challenge: Discovery

Category: Intermediate

Region: Frontenac, Lennox & Addington

City: Kingston, ON

School: Loyalist Collegiate Vocational Institute - LCVI

Abstract: After designing and building a wind tunnel, I tested the effects of prevailing wind on TinkerCad designed, 3D printed cylinders, rectangular prisms and semi-cylinders with differing rear shapes. Using these 3D printed shapes, I tested different elements of building design and found that weight, shape, wind speed, height and lee side geometry have adverse and predictable behaviours on the shapes.

Biography

My name is Dylan Layton-Matthews and I live in Kingston Ontario. I was born on Toronto, however, I have lived or travelled to USA, Mexico, Cayman Islands, Belize, Fiji, New Zealand, Australia and Costa Rica. I started school in Australia. I currently attend Loyalist Collegiate & Vocational Institute and I play Volleyball competitively with The Kingston Pegasus and swim competitively with the Kingston Blue Marlins. This year is my third CWSF I won a bronze in 2013 and a silver in 2014. All of my projects have been engineering based, choosing my projects on structural engineering. I am planning to go to University and study in an engineering field. I had a great time with this year's topic on wind and its effect on structures. I would recommend to other students to start their research early and start their experiments as soon as possible especially if they will take a long time like mine did. I would also advise students to write their report as they complete experiments and keep a good and accurate log book of these observations.

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