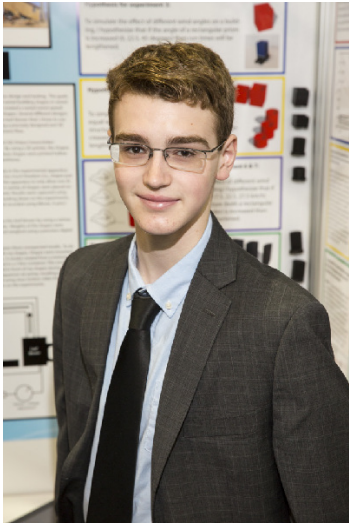


## CWSF 2015 - Fredericton, New Brunswick



### 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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