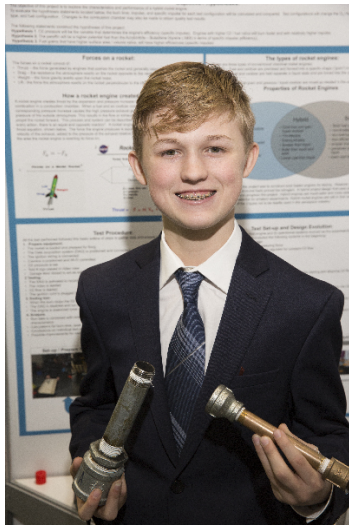


CWSF 2019 - Fredericton, New Brunswick



Henley Mullins

Experimental Optimization of a Hybrid Rocket Engine

Challenge: Innovation

Category: Junior

Region: Eastern Newfoundland

City: St Johns, NL

School: St. Bonaventure's College

Abstract: A functioning hybrid rocket engine was built using store-bought materials. ABS plastic fuel grains were 3D-printed in various configurations. ABS plastic and paraffin fuel grains were burned in a combustion chamber with gaseous oxygen. The force from the engine was measured and changes in shape, material, and fuel/oxygen ratio were made to optimize for thrust.

Biography

My name is Henley Mullins. I am a grade 8 student at St Bonaventure's College in eastern Newfoundland. My interests include tinkering and rockets (following SpaceX). I am also an avid reader, play the string bass and love the outdoors. I want to be a mechanical engineer when I grow up. I believe that SpaceX and other private space companies will lead humanity into the future of space.

Awards

Value

Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$1 000