

## CWSF 2016 - Montreal, Quebec



### Kieren O'Neil

#### The Quest for A Smart Autonomous UAV, Part One: To Engineer A Drone

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Cariboo Mainline

**City:** Kamloops , BC

**School:** Sa-hali Secondary

**Abstract:** My project goal was to design and build a functioning drone quadcopter from individual components. The design stage involved researching and preparing specifications to build using open source hardware and software, since a future goal is to use the drone as a platform for development of collision avoidance software. The build and pre-flight testing are complete and the drone is ready for flight testing.

#### Biography

I am fifteen years old and in grade 9 at Sa-Hali Secondary School. This is my second CWSF. My favorite sports are curling, snowboarding and volleyball and I was on the Sa-Hali curling team this year that went to zones. I play the flute and some other instruments and am in my school concert band and jazz band. I volunteer at the Big Little Science Centre in Kamloops. I am a Venturer Scout and I recently completed my Chief Scout award. In 2015 I received third place in the Scout Canada National STEM contest. For the past two years I have been part of BC School District 73's Student Space Flight Experiment (SSEP) team that participated in Mission 6. Our team designed and sent a crystal experiment to the International Space Station in 2015, and presented our results at the SSEP Conference held in Washington DC. I have finished in the top three several times in the regional Popsicle Stick Bridge Contest. I like designing and building things and thought of my current project idea after learning about drone technology and accidents.

Youth Science Canada  
PO Box 297  
Pickering ON L1V 2R4  
[www.youthscience.ca](http://www.youthscience.ca) / [info@youthscience.ca](mailto:info@youthscience.ca)  
416-341-0040