

## CWSF 2016 - Montreal, Quebec



### Caleb Charette, Riley Geisler

#### Synthetic 3-D Printed Heart

**Challenge:** Innovation

**Category:** Intermediate

**Region:** North Bay

**City:** Callander, ON, Powassan, ON

**School:** West Ferris S.S.

**Abstract:** This project incorporated medicine and technology to build an anatomically correct human heart model. A 3-D printer was used with computer software and synthetic materials. The final result was a scaled model of a heart, with similar anatomical features. This project showed that printing inexpensive 3-D hearts was possible and could lead to further development of printing a functional heart.

#### Biographies

**Caleb** - My name is Caleb Charette, I'm 15 years old, currently in grade 9, and I am a member of the "Synthetic 3D Printed Heart" project. Our project is testing the ability to use a 3D printer to create a functioning heart. We drew inspiration for our project from our families and our passion for medicine. My partner, Riley Geisler, and I both wish to become surgeons one day, and we both also have close family impacted by heart disease. We wanted to create a project that not only related to medicine, and our families, but also incorporated the technology we have at our school. We decided we wanted to use our schools 3D printer, and began to plan our ...

**Riley** - My partner Caleb Charette and I took up the idea of 3D printing a synthetic, functional heart, as a way to incorporate our passion for medicine and available technology at West Ferris Secondary School, in North Bay, Ontario. We both grew up in small towns outside of North Bay, with plans to attend McGill University for a bachelor degree. I wish to attend an Ivy League school for my M.D. Our almost unfathomable thinking led us to the fabrication of our project. We plan to continue our project after the Canada-Wide Science Fair in hopes of saving lives and maybe earning a scholarship along the way. Our project has enlightened the two of us, and...

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