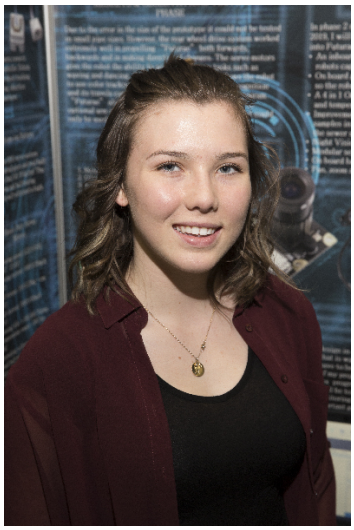
CWSF 2019 - Fredericton, New Brunswick



Maija Niemi

Robot Prototype for Sewer Infection Phase 1

Challenge: Innovation
Category: Intermediate
Region: Northwestern Ontario
City: Gorham , ON
School: St. Ignatius S.S.
Abstract: I am developing a robot that will be able to detect dangerous gases in the sewers. It's also going to detect if there are any cracks in the sewer pipes along with a mapping system telling you where the robot is and where the crack is. It will also be more advanced and be able to detect drugs and disease in the sewer.

Biography

I am a grade 10 student at Saint Ignatius High School in Thunder Bay, Ontario. I've been very fortunate to be able to play various sports at both the Provincial and National level but due to an injury I have been unable to compete for about a year now. Because of this I've had to find another field of interest to keep me busy and this is where I found my love for robotics. The inspiration for my project on artificial intelligence arose out of a disaster in 2012 when over 100mm of rain flooded the City of Thunder Bay's sewage treatment plant, destroying homes, roads and infrastructure. Emergency crews found themselves working in unsafe, dangerous environments and that's the reason why I wanted to develop a robot that could go into the areas where humans should not. If I was going to give someone advice on doing a science fair project, I would tell them to choose something that they are passionate about. If you don't love what you are doing it will become a chore and the point is to have fun and gain further knowledge on your interests.