

## CWSF 2017 - Regina, Saskatchewan



### Matthew Monias, Waylon Harper

#### Exploring Sound

**Challenge:** Innovation

**Category:** Intermediate

**Region:** Island Lake

**City:** Garden Hill, MB, Garden Hill First Nation, MB

**School:** Garden Hill First Nations High School

**Abstract:** The purpose of this project is to understand sound and its properties, as well as to create a prototype to detect distance using ultrasound frequency and computer technology. The prototype works similarly to a sonar system where the sound waves emitted, bounces back from an object encountered, determining its distance. This device is designed to benefit individuals with sight deficiency.

#### Biographies

Matthew - My name is Matthew Monias. I come from Garden Hill First Nation in the province of Manitoba. I am musician, playing keyboard, guitar and drums. I am also a music producer and a singer. My inspiration for this project arose from my interest in sound and computer technology.

Waylon - Hi, my name is Waylon Harper, I come from Garden Hill First Nation in Manitoba. My hobbies are drawing, listening to music, play video games, and read books. I decided to do this project because I would like to understand, and acquire knowledge of how Sounds are transmitted and received by the human ear. I also would like to do further studies on the application of Sound technology to benefit people with sight problems. My advice to students is to work very hard, own their projects, and don't give up when you don't have good results. Be perseverant.

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