



## Colorado Science and Engineering Fair

## 2025 Individual Project Abstract Form

**Please print 2 copies of the completed form. Sign both copies, keep 1 for your notebook and submit 1 copy to your Regional Fair Director with your other paperwork.**

Title of Project: Road Ready

Finalist's Name: Devon Mahorney

School and City: West Grand High School

Sponsor's Name: Emmylou Harmon

Category: Engineering

Division: Senior (grades 9 - 12)

Abstract (250 words or less):

The purpose of this project was to create a device that would aid people with knowing where other drivers are on the road. My goal was to develop a device that would send alert communications from device-to-device, or vehicle-to-vehicle. I met this goal along with all of my design criteria.

The application for this device was that drivers could notify other drivers if they are stopped or in danger on the roadway. This device has the potential to stop fatalities and injuries caused by stopped car accidents. It could also be useful in the development of self-driving cars by creating a communication network between vehicles. This network could be useful in many ways and could help save lives.

To develop something capable of these things I programmed devices called Micro Bits. The first step was to buy these devices. Then I had to learn how to use them. I continuously programmed the Micro Bits and tested them until they met my goals. The end result was three devices that can communicate between each other when prompted to do so.

My final design consists of devices that can send the words "caution" and "SOS" between each other when you press a button. They met all of my design criteria and requirements. However, they have the limitations of having a short radio range. Although they can not function as a product because of these limitations, my prototypes met all of my goals.

*I hereby certify that the above statements are correct and the information provided in the Abstract is the result of one year's research. I also attest that the above properly reflects my own work.*

Finalist's Signature:

Date:

In addition, all students must complete the ISEF Student Checklist (1A), Research Plan, Approval Form (1B), and Checklist for Adult Sponsor (1), and any other ISEF forms required for this type of project. See the International Rules and Guidelines for form requirements. Return COPIES of all of these forms to your Regional Fair Director with you Finalist Verification/Permission Form. **A signed copy of this form must be included in your notebook.**