

# CWSF 2015 - Fredericton, New Brunswick



## Mary Hoover

### Catching Combine Fires

**Challenge:** Innovation

**Category:** Junior

**Region:** Parkland

**City:** West Bend, SK

**School:** Foam Lake Composite High School

**Abstract:** My project is the invention of a fire protection system for combines. It monitors critical components for heat buildup or carbon monoxide emission on various parts of the machine. The apparatus was created using an Arduino programmable logic controller, multiple sensors, and an LCD display. It was tested using a blow dryer and a candle. It was not mounted and tested on an actual combine.

### Biography

Mary Hoover is 14 and currently in grade 8 in Foam Lake Composite School. This is her second year participating in Regional Science Fair and her first year making it to CWSF. She lives on a farm south of Foam Lake and enjoys activities such as badminton, writing, drawing, filming, reading, archery, photography, snowboarding, quadding, sledding, and mudding. Through the years she has accomplished various awards through band, writing and dance. Her favorite subjects are English and Math. The idea for her project came to her through the influence of her father. If she were to continue this project, she would attempt to market it through major machinery companies. After high school, she plans to further her education by receiving a degree in English Literature, Psychology, or Law. Her advice to other students thinking about doing a project would be to always choose a topic that interests you, it will make it much more fun.

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