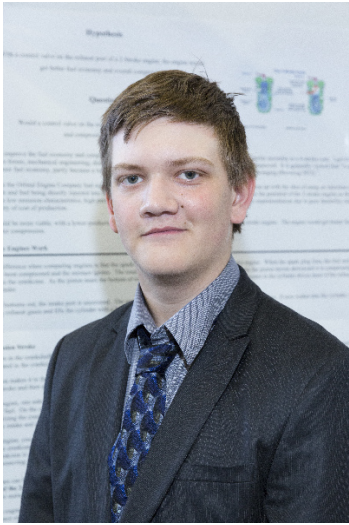


## CWSF 2018 - Ottawa, Ontario



### Holden Willoughby

#### The Green Machine

**Challenge:** Innovation

**Category:** Junior

**Region:** Prince Albert & Northeast Saskatchewan

**City:** Shellbrook, SK

**School:** W.P. Sandin Composite

**Abstract:** I studied the benefits of applying an exhaust port control valve on a 2-stroke engine. This would give the engine better fuel economy, compression and horsepower overall. Another benefit would be that it would be a greener option and better for the environment as there would be less unburned fuel escaping the engine.

#### Biography

I am a 14 year old student at W.P. Sandin in Shellbrook, Saskatchewan. I enjoy farming, carpentry and rebuilding engines of all types. I plan to go to school to become a heavy duty mechanic. I stumbled across a forum online where they were discussing how it may be possible to improve the 2-stroke engine. This gave me an idea of how I could increase compression and fuel economy making it a greener option. I would like to expand my investigations by furthering the execution of my theory so it could be produced on an industrial scale. My advice to students who are looking for a project to enter in a science fair is to find something you are interested in and have fun with it. Do not pick something just to try to win.