

# CWSF 2015 - Fredericton, New Brunswick



## Charley Smith

### Driving our Cars on Wood and Water

**Challenge:** Energy

**Category:** Intermediate

**Region:** Central Okanagan

**City:** Penticton, BC

**School:** Penticton Secondary

**Abstract:** Developing alternatives for fossil carbon energy and lowering emissions helps to ensure a sustainable energy future. I have engineered and constructed a biomass gasifier equipped with a hydrogen dry cell which has been installed on a Dodge Neon car. This innovation has shown that the addition of a hydrogen dry cell was beneficial in the burn process of wood gasification in an internal combustion engine.

#### Biography

My name is Charley Smith and I attend Pen High in Penticton B.C. Racing cars at the Penticton Speedway is a passion of mine as I like to build and race my cars at high speeds. Last year in hornet class racing it was amazing to get first place in my class. Being able to go to national science fair for the third year in a row is an honour and a highlight of my life. My future goal is to attend University to study and receive an Engineering Degree. Designing and building is what I do and making things that can operate off low cost, free energy and renewable resources is beneficial for everyone and the planet. Building an Up Draft Gasifier is my next project in an attempt to see if I can obtain better results. For students looking to do a project my best advice would be passionate about their project and research all you can to understand it. Don't give up.

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Challenge Award - Energy - Intermediate Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$2 000</b>