CWSF 2019 - Fredericton, New Brunswick

Emilia Dyksterhuis

Spare Our Air: The Use of Algae Scrubbers in the Oil and Gas Industry

Challenge: Environment
Category: Junior
Region: Northern British Columbia
City: Fort St. John, BC
School:

Abstract: Let's take the pollutants carbon dioxide and hydrogen sulfide out of our environment by using algae to absorb these harmful gases through the natural process of photosynthesis. The oil and gas industry creates a large amount of this pollution in western Canada. Algae and plants will "scrub" these gases and will make our world cleaner. A cleaner world will mean a healthier and safer future.

Biography

I live on a hay farm in the heart of northeastern BC's oil and gas industry, just north of Fort St. John. I homeschool and love to ride and train horses, participate in 4H, and play volleyball and basketball in my free time. One day I hope to become a veterinarian. The area I live in is a part of the Montney Formation, which is a major Canadian oil and gas resource, so there are a lot of well-sites and gas plants around my community. These produce H2S, CO2, and many other harmful pollutants. This got me thinking about how we could reduce the pollutants CO2 and H2S from our atmosphere using something effective and simple, like an algae scrubber? If I were to continue this project next year, I would test methane, another major industry pollutant, to see if algae scrubbers are able to absorb that gas also. My suggestion for fellow students thinking about doing a science project is to explore something that interests you and that you are passionate about! If you need help, don't be afraid to ask an adult or teacher. That's what they're there for!

Awards	Value
Excellence Award - Junior - Bronze Medal Sponsor: Youth Science Canada	
Western University Scholarship Bronze Medallist - $1000 Entrance Scholarship Sponsor: Western University	$1 000
Total	$1 000

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