CWSF 2016 - Montreal, Quebec

Connor Maxwell

Farmland To Filtration: Improving Water Quality

Challenge: Environment
Category: Junior
Region: Bluewater
City: Hanover, ON
School: Holy Family E.S.

Abstract: Using Brine Shrimp as the indicator species, 105 trials were conducted to design low cost, low maintenance filtration systems and test their effectiveness at filtering simulated agricultural runoff. Each trial took 288 to 456 hours to complete. The mortality rate, pH, filtering times, total phosphate, nitrate, sulphate, total suspended-solids, dissolved oxygen, specific gravity, and water volume were utilized in the evaluation of each filtration system.

Biography

Connor Maxwell is a grade 8 student and a member of the Student Council at Holy Family School in Hanover, Ontario. He enjoys hockey, swimming, soccer, reading, writing and science fair. This is the fifth year he has participated in science fair and his second trip to Canada Wide. Connor was inspired to complete this project because of his keen interest in the environment. He also enjoyed spending time at his uncle's wetland and around the river that runs through his grandparents' property. The previous three years he experimented with the mortality rates of Brine Shrimp. He examined Brine Shrimp and hatch rates in different pH solutions. He also studied the effects of pollutants on Brine Shrimp. This year Connor wanted to see which filter he had created would result in the lowest mortality rate of the indicator Brine Shrimp. Connor thought that it would be interesting to determine if he could create a low cost, low maintenance agricultural filter that could effectively filter water and thus improve the survival rate of the brine shrimp. Connor is exploring possible careers in environmental engineering as he is very passionate about environmental advocacy.

Awards	Value
Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - $2000 Entrance Scholarship Sponsor: Western University	$2 000
Total	$2 000