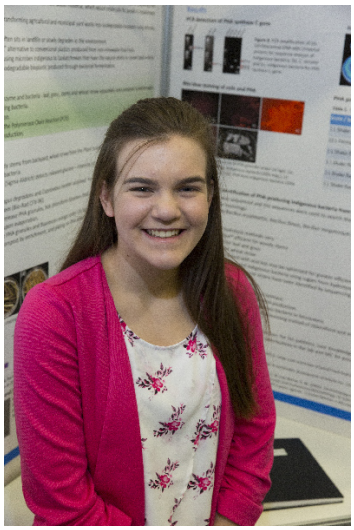
CWSF 2018 - Ottawa, Ontario



Shaelagh Stephan

Plant Waste to Biodegradable Bioplastics

Challenge: Resources
Category: Intermediate
Region: Saskatoon
City: Saskatoon , SK
School: Martensville High
Abstract: This project aims to find new ways of using plant waste by turning it into sustainable plastic with bacteria you might find your backyard. In nature, some bacteria digest the glucose found in plants and produce a chemical that can be converted into biodegradable plastic. I identified and isolated these bacteria and explored ways to break down plants into simple sugars to feed the bacteria.

Biography

I am a grade 9 student at Martensville High School in Saskatchewan. I enjoy playing sports, especially soccer and basketball. I also love road trips, reading, playing the piano, and doing cool science experiments. I plan on attending university to become an environmental engineer. I placed third at Sanofi Biogeneius Competition last year, tied for third at this years' regional competition and won an outdoors award related to my project. I was inspired to do this project because I am concerned about how conventional plastics are damaging the environment. Future work of this project will focus on the optimization of bacterial hydrolysis and the use of hydrolysate in fermentation for PHA production by indigenous bacteria. My advice to other kids is to get involved with this type of work and get excited about it too. What really helped me was my mentor that guided me and the lab equipment and materials I used.

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