

CWSF 2016 - Montreal, Quebec



Toby David Small

Maple Syrup: A solution to assist the goal of self sustenance in space?

Challenge: Resources

Category: Junior

Region: Northwestern Ontario

City: Thunder Bay, ON

School:

Abstract: My objective was to evaluate whether maple syrup was a viable natural hydroponic solution. Maple syrup solution was compared to an artificial nutrient solution in influencing the growth of germinated sunflower seeds. There was no significant difference between maximal growth or rate of growth between the two. Further experimentation to validate results is needed, and to reduce the confounding factor of potential algae growth.

Biography

Hi, I am Toby Small. I was born and raised in Scotland, but moved to Canada when I was eight. I lived in Ottawa for two years and then moved to Thunder Bay. I like almost every sport, cooking, gardening and arts. I was in school until last year. When I started homeschool with my mum, one of the main things I wanted to try was a science project. I have never been to or entered a science fair. I was on the internet looking for ways to do indoor gardening in the winter, and I found that one of the popular methods was hydroponics. I tried a few little experiments to figure out how it works. During that stage, I come up with the idea to grow sunflowers in a diluted maple syrup solution compared to sunflowers grown in a diluted artificial nutrient solution. In future experiments I hope to make a flowing water system to reduce algae growth and try other plants. One thing I would say to those thinking about doing an experiment is that science fairs are really fun if you choose a subject that you find interesting.

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