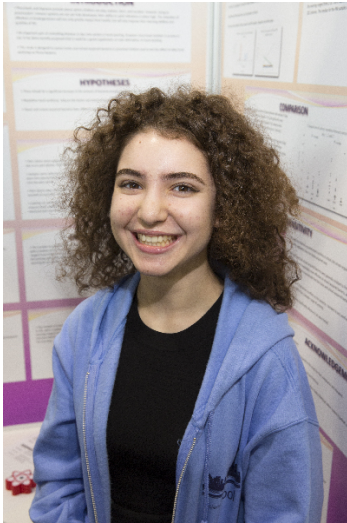


CWSF 2019 - Fredericton, New Brunswick



Sophia Khoury

Hand Sanitizer and the Elimination of Home and School-Acquired Bacteria

Challenge: Health

Category: Junior

Region: Toronto

City: Toronto, ON

School: La Citadelle International Academy of Arts & Science

Abstract: This study aimed to assess the effects of hand sanitizer on home and school-acquired bacteria on kindergarteners. In addition, different types of antibiotics were used to test bacterial resistance. After 4 days of repetitive hand sanitizing, there were significant decreases in home and school-acquired bacteria. Further studies are needed to determine whether a decrease in bacterial load leads to a reduction of infections.

Biography

My name is Sophia Khoury, and I am from Toronto, where I attend La Citadelle Academy. Growing up with parents in the medical field has cultivated my scientific curiosity, resulting in biology and health being areas of interest for me and career paths that I have considered for the future. Every year, I have the opportunity to conduct an experiment, which is then showcased at my school's science fair. I have always wondered about the bacteria-killing properties of hand-sanitizer (H.S). Therefore, my project tested the effects of H.S. on eliminating bacteria on kindergarteners. Taking this one step further, I also tested antibiotic sensitivity, giving insight on the amount of resistant bacteria on the hands and determining whether or not it can be eliminated using H.S. In the future, I hope to conduct further studies to investigate whether a decrease in bacteria leads to a reduction of infections. I would also like to test different types of H.S. to observe their effects on beneficial and harmful bacteria. I have conducted numerous experiments over the years and have recently decided to focus on something not only interesting, but also relevant to others who may be considering doing similar science projects.

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 |