

# CWSF 2019 - Fredericton, New Brunswick



## Christopher Lamont

### Creation of an Intravenous Fluid Administration System for Low Income Countries

**Challenge:** Innovation

**Category:** Junior

**Region:** Bay Area

**City:** Hamilton, ON

**School:** St. Margaret Mary E.S.

**Abstract:** In low and middle income countries, intravenous fluid pumps are not available due to cost and the need for electricity. This project describes the design and development of an innovative, affordable, 3D printed, mechanical intravenous fluid delivery system (IV FDS) for use in under resourced countries. The IV FDS is the first of its kind and has the potential to save millions of lives worldwide.

#### Biography

David Christopher Lamont is a Grade 8 student at St. Margaret Mary School in Hamilton, Ontario. This is Christopher's second CWSF; he attended the CWSF in Ottawa in 2018 where he received a Silver Medal and the Youth Can Innovate Award. This year, Christopher was motivated to complete a project that would have broad reaching implications. After learning from the World Health Organization that diarrhea and dehydration causes death in almost 1,500 children less than 5 years of age per day in low and middle income countries, he decided to design and build a mechanical intravenous fluid delivery system (IV FDS) for use in children. Christopher's low cost, innovative, 3D printed IVFDS is the first of its kind in the world and has the potential to save millions of children's lives in under resourced countries. Christopher is passionate about math, computer sciences and engineering. Outside of school he spends most of his time playing competitive hockey. Participating in Science Fairs at various levels has given Christopher the opportunity to explore new interests, develop ideas and gain confidence and skill in communicating his work to others.

#### Awards

#### Value

S.M. Blair Family Foundation Award - Junior Sponsor: S.M. Blair Family Foundation	\$500
Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
Youth Can Innovate Awards - Junior Sponsor: The Gwyn Morgan and Patricia Trottier Foundation	\$500
<b>Total</b>	<b>\$5 000</b>