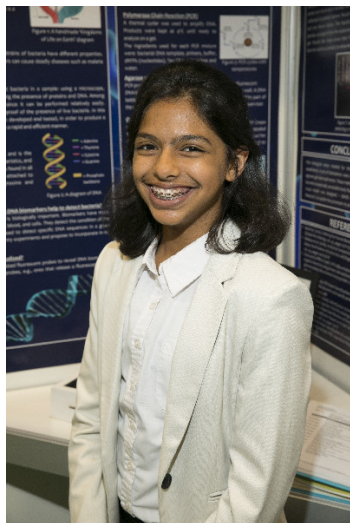


# CWSF 2017 - Regina, Saskatchewan



## Neha Gupta

### Development of a Portable System for Detection of Bacteria Using DNA Biomarkers

**Challenge:** Innovation

**Category:** Junior

**Region:** Bay Area

**City:** Dundas, ON

**School:** Sir William Osler

**Abstract:** The goal of this project is to develop a portable device to detect bacteria using DNA biomarkers, a DNA detector, and a fluorescent light sensor. Towards this, several biomarkers were identified, a subset was validated using known bacteria specimen, and externally accessible body fluid samples were tested for the presence of bacteria. This device can accelerate identification of pathogens in a sensitive and affordable manner.

#### Biography

My name is Neha Gupta, and I am a grade 7 student at Sir William Osler Elementary School. I enjoy participating in sports like swimming, running, basketball, volleyball and badminton. I do competitive swimming and butterfly is my favourite stroke. Some of my hobbies include reading, watching my favourite TV shows, singing and playing the flute. My favourite book is What If?, by Randall Munroe. I have had a passion for science ever since I was little. I enjoy learning new things and exploring new possibilities. My advice to other students would be to choose something they are passionate about. My motto of life is 'Dream Big, Work Hard and Stay Focused'

#### 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