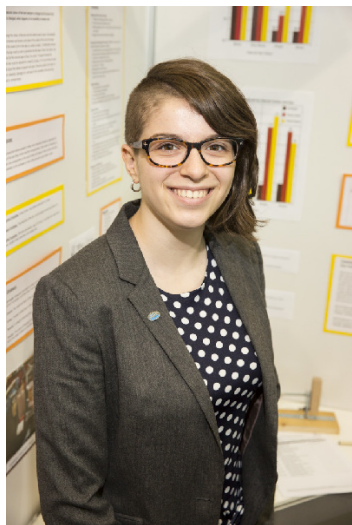


# CWSF 2015 - Fredericton, New Brunswick



## Madison Santos

### Stretch or Snap: The Effects of PH on Hair Durability

**Challenge:** Health

**Category:** Intermediate

**Region:** Toronto

**City:** Toronto , ON

**School:** Bloor C.I.

**Abstract:** My experiment examined the effects of pH levels in hair dye on the durability to tension and torsion of the hair as well as cellular alterations. I recorded the quantitative measurements of hair durability by setting up the hair in my machines and recording the amount of millimeters or grams respectively. I recorded the qualitative observations by inspecting the hair under a microscope.

#### Biography

My name is Madison Santos and I attend grade nine at Bloor Collegiate (Toronto) in a specialized math and science program, TOPS. In grade eight, I graduated as top science and engineering student in my school. I'm part of Bloor's robotic's team, chemistry club, jazz band, DECA, and debate team. I'm a flight corporal in Air Cadets and have been accepted into the Basic Aviation Technology and Aerospace Engineering three week course this summer. I'm thrilled to be able to participate in the National Canada-Wide science fair and share my findings while learning about the findings of others. My project was inspired by me wanting to challenge my negative opinions towards hair dye, answer questions I had pertaining to the apparent texture of dyed hair, and apply my prior knowledge of the structure of hair and preparation of wet mounts. I focused on a small demographic, and so to further my investigation, I would expand my experiment to include both genders and multiple ethnicities. My advice to other students, would be to stay curious, and if you find something, keep on searching even if it doesn't follow your original format, you might just make the next breakthrough.

#### Awards

#### Value

Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
<b>Total</b>	<b>\$2 000</b>