

# CWSF 2016 - Montreal, Quebec



## Sophia Cottrill

### Evolution or Extinction? Time Will Tell for the King of the Arctic

**Challenge:** Environment

**Category:** Junior

**Region:** Bluewater

**City:** Tara, ON

**School:** Sullivan Community E.S.

**Abstract:** This study utilized DNA and protein sequencing analyses from GenBank® to determine if polar bears were uniquely distinct from other species. In each analysis, sequences for polar bears were compared against other species using BLAST®. The results of the analyses showed that due to their high level of specialization, the polar bear may soon become nothing more than an image engraved on a toonie.

#### Biography

If someone were to ask my peers what my most distinguishing factors were, they surely would say my love of polar bears, science fair, and soccer. My passion for polar bears is the driving force behind my project. I believe that it's important for people to pursue their personal interests, to not be afraid to question the unknown, and to find answers! This past October, I was fortunate to go to Churchill, Manitoba to see polar bears in the wild! Seeing these amazing creatures up close in their natural habitat sparked a greater insight. I knew that my life's ambition is to study polar bears and their DNA, as a polar bear biologist someday. While in Churchill, our tour guide told us about a polar bear stalking a family of geese on a pond while waiting for the sea ice to form. The polar bear submerged itself in the water, and plucked a goose from underneath. This sparked a question that I was compelled to answer: Could the polar bear survive climate change? This is the question that led to my project this year: Evolution or Extinction? Time Will Tell for the King of the Arctic.

#### Awards

#### Value

Challenge Award - Environment - Junior Sponsor: Youth Science Canada	
Excellence Award - Junior - Gold Medal Sponsor: Youth Science Canada	\$250
Western University Scholarship Gold Medallist - \$4000 Entrance Scholarship Sponsor: Western University	\$4 000
<b>Total</b>	<b>\$4 250</b>