Connor Maxwell

Analysis of Nutrient Trends and Impacts on Aquatic Ecosystems

Challenge: Environment
Category: Intermediate
Region: Bluewater
City: Hanover, ON
School: Sacred Heart H.S.

Abstract: Water quality data, including nutrient levels, from the past 15 to 49 years were analyzed for 24 locations across Ontario to determine the trends that lead to water quality changes. These trends were compared to stream data and a correlation was found proving that Climate Change and other significant impacts have occurred. Fifty-two trials were conducted to forecast future mortality rates using an indicator species.

Biography

Connor Maxwell is a Grade 10 student at Sacred Heart High School in Walkerton, Ontario. He enjoys hockey, swimming, soccer, reading, writing, and science fair. This is the seventh year that Connor has participated in science fair and his fourth trip to the Canada-Wide Science Fair. Connor was inspired to complete this project due to his keen interest in science and the environment. He also enjoyed spending time at his uncle's wetland property and around the river that flows through his grandparents' property. In previous years, Connor experimented with the mortality rates of Brine Shrimp. He studied the effects of pollutants on Brine Shrimp and created a low-cost filter to trap pollutants prior to entering streams and larger waterways. Connor also investigated Ontario's changing climate and streamflow. This year Connor investigated years of archived nutrient data to determine if significant quantitative changes had occurred in his local watershed and if these variations could impact the aquatic species that inhabit them. This could lead to the local Conservation Authorities and communities being better prepared for future changes to their local watersheds. Connor is exploring possible careers in environmental engineering and hydrology. He is extremely passionate about environ...