

Faculty of Engineering Summer Programs Venture and L.E.A.P.



Venture Outreach Initiatives

Kidz Club

During the school year, Venture Outreach offers weekend programs through the Venture Kidz Club. With two classes; Junior (grades 1-4) and Senior (grades 5-8), Venture Kidz Club allows students to delve further into the world of engineering in this three-session program. Students have the opportunity to design, build, and experiment with themes from the various engineering disciplines offered at McMaster University. The small class sizes allow for an intimate and meaningful experience that is a continuation of Venture Summer Camp.

Robot Experience Day

This full-day event invites students from grades 5-8 to explore the world of robotics with NXT Lego Robotics kits. Students have the chance to build a pre-programmed robot in an engineering design challenge, while also having the chance to program their robots to do nearly any task! This event inspires innovation with a large focus on the technological world, as well as the many applications of computer and software engineering in our society!

Hamilton Regional Indian Centre

This year, Venture Outreach was invited to participate in after-school programming for inner-city aboriginal youth at the Hamilton Regional Indian Centre each week in November. Participants ranged in age from 4 to 13 and were engaged in projects ranging from simple circuits to landfill design. These projects encouraged teamwork and problem-solving while delivering culturally-relevant material.

YMCA: Beyond the Bell

During February and March, Venture Outreach travelled to Queen Victoria School for weekly, after-school workshops. Students in grades 5-8 were introduced to various themes within engineering ranging from aerodynamics to electrical design! Students were encouraged to work together to solve engineering design problems and question the problems and information presented to them. The Outreach Team continued working with the YMCA throughout the summer at various school locations.

STEM Conference

This year we continued our annual STEM Conference for aboriginal youth for our third year! 136 students attended STEM Conference to work on hands-on projects, with a focus on computer science! This event also introduced students to campus life as they had the chance to spend a night in residence, swim in the campus pool, and partake in a campus tour! All feedback for this event was positive and we look forward to preparing for next year! This is an excellent way to continue the relationship with Six Nations that we already have, as well as encouraging students to attend Six Nations Camp held at McMaster University in the summer!

Aboriginal Travelling Workshops

For May and June this year Venture Outreach delivered workshops to aboriginal schools from Six Nations to Toronto. Each class participated in a presentation based upon the curriculum of their respective grade. These presentations are based on scientific theory, and after students apply it to a hands-on project. We had continued success this year reaching 23 aboriginal schools, and 3,768 students—an all time record for the Venture Outreach Team!

Homeschooling @ Mac

Home-schooled students from the Hamilton Area were welcomed to McMaster for our annual homeschooling event. 60 students from grades 3-8 attended this year to work on two hands on projects. These projects stressed working within a team, as well as practicing critical thinking when addressing problems.

BASEF Science Fair

Venture Outreach continued the tradition of judging the Bay Area Science and Engineering Fair this year. We were able to deliver a presentation of our program for both Venture and LEAP as well as handing out three scholarships to students who went above and beyond in exploring the STEM Fields.

Six Nations Camp

For the first time, Venture Outreach welcomed students from Six Nations and New Credit Reserves to McMaster for two free weeks of camp!

This year we hit record numbers in attendance—having over 30 children each week! Campers were provided with transportation to and from the reserve as well as catered snacks and lunches throughout the week.

This was an excellent chance for students to become familiar with the amazing opportunities post-secondary education can offer—from living in residence to attending a lecture. The campers also became exposed to the many facilities at McMaster such as the Planetarium, dissection labs, and chemistry shows. Here they were able to view stars and planets, learn about anatomy, and experience the wonders of the chemical world, respectfully.

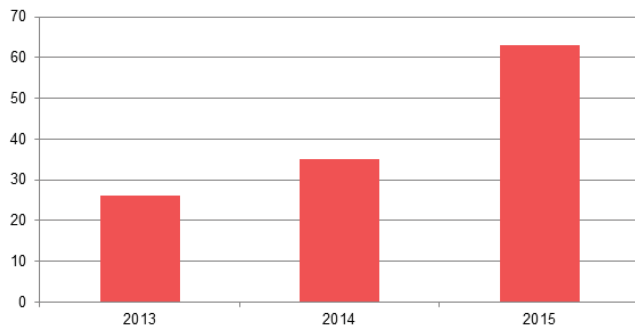
With this amazing opportunity, campers became familiar with all of the engineering disciplines offered at McMaster through hands-on projects, demonstrations, and interactive presentations. There was a great focus on cultural relevance, and joining what students have learned at camp to aboriginal traditions and culture. This was done within projects, but most noticeably in Community Mapping where students place pictures and markers on a map of places that are meaningful to them. This became a great way to adapt to a new environment while considering where we come from, and where we are going!



Aboriginal Outreach Statistics

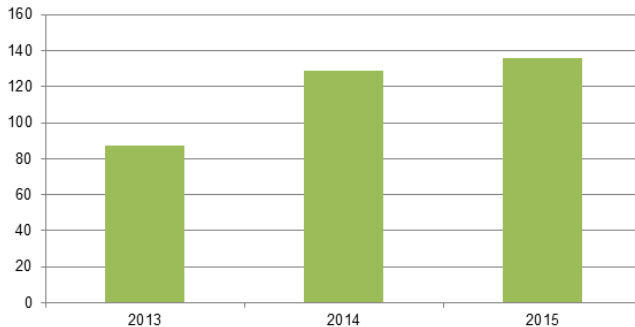
This year, our Outreach Team has had many accomplishments, including the new Six Nations Summer Camp held at McMaster University, the expansion of our STEM conference and increased youth outreach initiatives. Our team strives to reach children through numerous avenues, including: the Hamilton Regional Indian Center, Six Nations Elementary Schools, the YMCA, and Beyond the Bell programs at IL Thomas and J.C. Hill Elementary Schools.

Six Nations Camp Registration

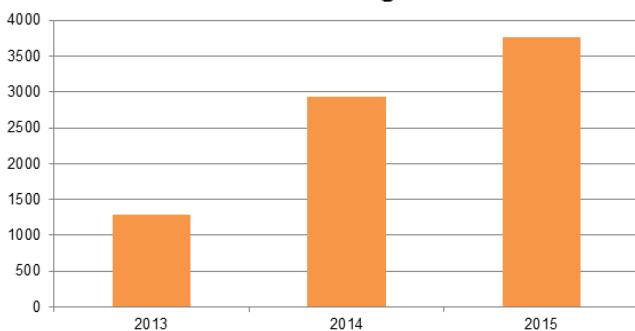


This year, Venture was able to provide **10 students** with aboriginal bursaries, as well as providing **63 students** with the opportunity to attend Six Nations Camp free of charge.

STEM Conference Registration



Outreach For Aboriginal Youth



Students completing our Six Nations Summer Camp stated that “Coming to McMaster has changed [their] viewpoint, as [they] didn’t realize how much fun university was!”

Female Initiatives

At Venture we are very committed to inspiring young girls to pursue all S.T.E.M related fields. We work closely with McMaster's Women in Engineering Society to engage both elementary and high school students throughout Ontario. Venture is proud to offer the following programs for female students.

Go CODE Girl!

This winter, Venture offered our first ever Go CODE Girl day! Students in grades 9, 10 and 11 were invited to a day filled with computing and software projects. From base conversions to python programming, all students walked away learning something new.

Go ENG Girl!

Venture has been hosting GO ENG GIRL events since 2003 (originally called the Women in Engineering Experience), dedicating ourselves to raising awareness about the engineering profession to girls in grades 7-10. More than 125 girls participate every year in hands-on workshops and meet with guest speakers who provide interactive presentations. Our goal is to provide the knowledge and encouragement necessary so that these students consider engineering as they plan their futures.

Sparks Day

Another initiative new to Venture this year was Sparks day which aimed to engage female students in grades SK and 1. Girls came to McMaster to participate in various workshops to explore the wide world of engineering. The Sparks were exposed to engineering through teamwork, design, and problem solving challenges! We hope to continue this initiative for many years to come!

Girl Guide Day

Each year at Venture, girls from different Girl Guide troupes throughout Hamilton and the surrounding area complete Venture workshops in order to earn their Engineering and Science badges. This event continues to grow, engaging 165 girls this year alone. We hope even more girls will come to earn their badges in years to come!