

Newbotics is a community success story in building leaders ? and robots



Leadership, teamwork and how to apply the skills you have for the real world have always been cornerstones of a solid education ? in some cases, however, finding the opportunities to hone these skills can be a bit harder to come by.

But a community-based initiative supported by Newmarket's Pickering College is expanding these opportunities for students across York Region and South Simcoe County by hosting Newbotics, Team 8349 in the FIRST Robotics program.

The team, which is comprised of students from Pickering College and Aurora's Cardinal Carter Catholic High School, along with Alexander Mackenzie High School, Sacred Heart Catholic High School, and Sir William Mulock Secondary School, recently qualified for the League's Ontario Provincial Championship, demonstrating that collaboration can transcend school boundaries.

Led by students, the team is supported by educators and coaches John Prickaerts, Tom Mellary, Andrew Boyes and Michael Brett, and are already looking ahead to the 2025-2026 season.

Helping to secure them a place in the Provincials was the construction of a robot designed to rise to the League's global challenge: Reefscape. Nearly 3,700 teams from around the world were tasked with navigating challenges tied to the theme of coral reefs; challenges which were chosen to showcase students' creativity, strategy, and technical skills.

Twenty-eight students from the five schools were part of this year's team.

?FIRST Robotics brings in this idea that you're able to go and take your coding and business mindsets, the manufacturing mindsets that kids may be learning in different technology, physics, and sciences classes, and gives them a community to plug that into, to do something real in the world with it,? explains Joshua Armstrong, Pickering College's Director of Teaching and Learning. ?FIRST Robotics is a worldwide community of people who are competing against one another to put these robots together, and the idea is that you work in collaboration with other teams and go and put together the best robot.

?The idea is that in the field you're working with two other team members from other schools to go and score points together, so they have to build relationships with one another and learn to work as teams along the way. There is this whole community that comes out of FIRST Robotics [that is] unique and that's more of what we need in the world, right? We need people who are able to look across the aisle and see things from somebody else's perspective.?

This is a view shared by Pickering College student Connor Rask who, with fellow student Anthea Huang, focused on the design and improvement of the team's robot, including the installation of a new multidirectional swerve drive to smoothly meet the challenges set under Reefscape.

‘It’s a way to apply our skills that we have already been learning in class,’ says Rask. ‘A lot of us are ahead in school and we might be getting a little bored with just the curriculum, so it’s a way to apply those skills and really make them come to fruition and solidify them. For me, I am really into software, so I really like the challenge of applying everything that I’ve learned in class directly to this robot.’

‘It was a unique opportunity this year – my computer science class was the robot, essentially – or a portion of that robot. It was just fun to be able to work on the robot every day, make up some code, and it helped us grow as a community, really. We got to know each other better through the robot, know what we’re good at, know what we might struggle with, and just help each other grow.’

As a team, they are also coming together to help all students grow.

Not every school has the resources to take full advantage of the FIRST program.

Becoming part of FIRST can be an expensive prospect, says educator-mentor Prickaerts, but opening the door to others, using Pickering College as its home base, has helped level the playing field – particularly in expanding access to the school’s mentorship, resources, and professional tools in its Innovation Lab and Makerspace.

‘It’s a unique program because it gives a lot of students who don’t have other ways of being engaged with teachers, and a lot of schools just don’t take it on because it is way too expensive,’ he says, noting that community teams have become a trend in Ontario.

Adds Armstrong: ‘It gives us a lot of opportunities to take kids in the community who might not have access to a program like this at their school because of some of the cost barriers that exist, pull them all under one roof and say, ‘Let’s work together to go and build something amazing in the Newmarket-Aurora region so that everybody gets the chance to go and compete. For the kids who love this type of program, who see how this helps them in their career, they kind of find their people here and want to pour their hearts into it.’

By Brock Weir