

## SAC kids to show off skills in Michigan's Robofest



**By Jeff Doner**

The St. Andrew's College middle school robotics team is off to the World Robofest tournament in Southfield, Michigan, after coming out on top at the qualifiers earlier this month.

Robofest is an annual robotics festival and competition designed to promote and support science, engineering, technology, math (STEM) and computer science for students in grades 5-12 and at the college level.

Robofest challenges teams of students to design, build and program autonomous robots to compete in two age divisions. The qualifying tournament, held for the first time at SAC, was a junior game competition open to students in grades 5-8.

The SAC team, coached by teacher Mike Hanson and community volunteer John Harrison, includes grade eight students Eric Asgari and Justin Lynn, joined by Aidan Walters and Nolan Michelberger, both in grade five.

"I think the boys have taught me as much about robotics as anybody else," said Hanson. "It's been very intriguing because it's one of the only topics that I know about less than the boys."

Hanson said this is sort of the pinnacle for Asgari and Lynn, who will be moving out of the middle school program after this school year.

"They've been working with me for close to three years, through their classes, projects, so this is sort of their crown jewel, as they leave middle school this year. These two kids are very passionate about robotics and have really latched onto it."

However, Hanson was quick to point out that the middle school team is in good hands with Michelberger and Walters around for a couple more years.

"They are brand new to the school and I offered a club program in January and February. They signed up for it and they really have a knack for it," he said. "They become the future of the middle school program now that Eric and Justin are moving on."

In terms of the club and competitions themselves, what these students do is no small task.

Hanson explained that there are elements of building, engineering and programming involved in the final products.

It all starts with building the robot out of Lego, making sure everything is to scale and that it can move properly. Then a mini-computer is installed and programmed to tell the robot what to do.

Once in competition, the robot has to perform four tasks in two and half minutes. Any interference from the students after the start

results in a penalty to their score.

The task the team is currently working on is detailed and certainly not easy.

The robot starts on a table, then has to find a black circle placed somewhere on the table. On that black circle there are three or four stacked boxes. The robot has to remove the top box and take it back to home base and then they must knock the remaining three boxes off the table. Finally, the robot must measure the circle and calculate its area using light and sonic sensors. Each team is given two chances to complete the tasks with their scores being averaged.

Hanson said the idea of the task is that there has been an oil spill around a condominium tower and the robot's job is to get there, save the people from the top floor, bring them back to safety, get rid of the contaminated lower floors and then calculate the area of the oil spill to get the cleanup started.

?I think the thrill of it all is the competition and seeing the robot they built actually completing the task. Once the robot is finished and gets back, they are just pleased as punch,? he said.

?They also enjoy the fact that it's a timed event and there's a little pressure on them and they like the competition. It's fascinating and great watching the kids do this.?

The team leaves for Michigan on May 17.