ROBOFEST®

Little Robots, **Big Missions** A Competition Motivating Young Minds to Master the Machine

Clearwater Citizen article: Kids learn to compete in Robofest competition

Kids learn to compete in Robofest competition

By ALEXANDRA CALDWELL

DUNEDIN – Four boys dance around a table with a decorated pillowcase on a stick as they shout "KAMELZ! We are the KAMELZ." A robot on the table dances with them to "In the Jungle." It's the team's final meeting in Dunedin before they enter their robot in the first regional Robofest Competition in Safety Harbor.

Robofest is a robotics competition for middle school and high school students to help the kids become excited about science, engineering, technology and math. Teams design, build and program robots to compete in various competitions, including Exhibition, Game Competition and the RoboFashion and Dance Show. There will be 15 teams at the regional competition Saturday, March 21, 1 to 5 p.m., at the Safety Harbor Community Center, 650 S. Ninth Ave. It is free and open to the public.

"I think it's fun that you can design stuff that no one has ever designed before, and you use computer software to program it, and I like doing that kind of stuff," said Michael Weigley, 12, of Safety Harbor.

Weigley makes up the "M" of the KAMELZ, which was derived from the team members' names: Kameron Madley, 13, of Oldsmar – he is the "KA"; Weigley; Niles Loughlin, 14, of Dunedin provides an "EL"; and Zach Jacquillard, 13, of Dunedin adds the "Z." The group met for a few weeks at Patent Attorney Michael J. Colitz Jr.'s office in Dunedin, who served as the team's coach. The boys designed and built their robot and programmed computer software to tell the robot how they wanted it to move.

The KAMELZ team's robot will compete in the RoboFashion and Dance Show against three other teams. The students must use their creativity and imaginations to come up with their own choreography and synchronize a skit with the robot, said Alaba, director and organizer for the event. The kids act out a skit while the robot dances, she said.

There are eight teams entered in the Junior Game, which is a techni-

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Photo by ALEXANDRA CALDWELL

From left, Kameron Madley, Michael Weigley, Niles Loughlin, and Zach Jacquillard run through a dress rehearsal of their skit for the Robofest Competition to take place March 21.

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cal competition, Alaba said. First the teams must draw a shape, but they will not know the size or shape the judges choose until during the competition. Teams are disqualified if they do not draw anything in 20 minutes. If the robot leaves the paper, it is a 50 percent deduction. Those who pass that test go on to the second game, where robots are teamed against each other and have to fight to occupy a certain area for three seconds or push the other robot off the table, Alaba said.

There are three teams registered in Junior Exhibition, in which students make up their own project, Alaba said. They use the Lego robot kit to demonstrate a goal, such as a task like feeding the cat, she said. All teams also will have to answer judges' technical questions about the math, science and programming of their robots, she said.

Students in the 15 teams are from all over the region, including Dunedin, Clearwater, Safety Harbor, Indian Rocks Beach, North Redington Beach, Belleair, Largo, St. Petersburg, Brandon and Ocala.

At the KAMELZ's final team meeting, Colitz brought in a secret weapon: 23-year-old Stephen Kowski, originally from Clearwater who now is studying to earn his master's degree in electrical engineering from the University of South Carolina. Kowski has worked with robots for 10 years and wanted to show the boys that robotics and engineering can be fun and is also an important profession.

"[Robofest] is a learning experience to get people exposed because we are drastically undermanned for the future," Kowski said. "As far as a world global economy, we are not putting out nearly enough engineers to compete with any of these countries, and it's going to hit in the next five to 10 years. People are going to wake up and realize, oh man, we're not producing anything or inventing anything anymore. All these boomers who were inspired by NASA and the project of going to the moon are now retiring."

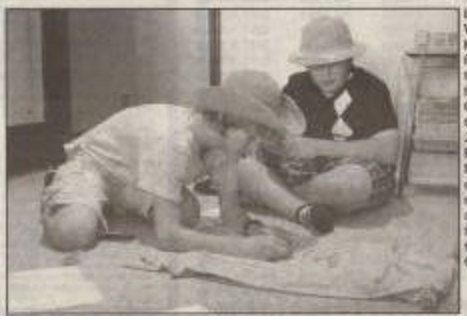
Robotics is a good way to expose kids to engineering, Kowski said, because it hits on all kinds of aspects of engineering: Computer science, mechanical engineering, electrical engineering and creativity. Kowski said the field needs kids like the KAMELZ team to become interested in engineering because the United States now has to fly in people from overseas to fill all the job positions that baby boomers are vacating.

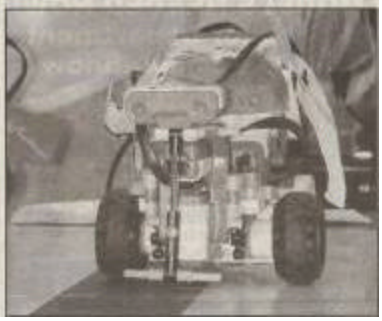
"There's just a lack of people in the engineering field," Kowski said. "It's hard, it's intensive, it's math-heavy, and not a lot of people like to do it, so we have to get people to understand that this is a fun thing you can enjoy doing, not just tedious math and grinding out numbers."

Alaba agreed. She is the owner of the Computer Learning Center in Clearwater and said her goal is to target fourth- and fifth-graders to show them math, science and computers can be fun. So far, the boys in KAMELZ are still interested. Weigley said he would like to be a mechanical engineer, Loughlin said he wants to go into engineering or science, and Jacquillard and Madley like computers. Jacquillard wants to program video games, and Madley likes computer software. Or he wants to be a congressman.

"The two hardest things about [Robofest] are programming and working together with people, trying to get the right ideas," Madley said. "Sometimes if you want an idea and another person doesn't, you have to create a new idea."

People who are interested in participating in next year's Robofest may call Alaba and get on a list to receive notices and updates about the event or about summer computer camps. Call 447-3067.





Left: Michael Weigley, left, and Kameron Madley finish decorating their team's flag for the Robofest Competition to take place March 21.

Right: The team KAMELZ robot dances down the runway during a dress rehearsal for their entry in the Robofest Competition.

Photos by ALEXANDRA CALDWELL

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Dunedin Beacon article: Kids learn, excel in Robofest

Beacon, March 27, 2009

Kids learn, excel in Robofest

By ALEXANDRA CALDWELL

DUNEDIN – Four boys dance around a table with a decorated pillowcase on a stick as they shout "KAMELZ! We are the KAMELZ." A robot on the table dances with them to "In the Jungle." It's the team's final meeting in Dunedin before they entered their robot in the first regional Robofest Competition in Safety Harbor.

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"I think it's fun that you can design stuff that no one has ever designed before, and you use computer software to program it, and I like doing that kind of stuff," said Michael Weigley, 12, of Safety Harbor.

Weigley makes up the "M" of the KAMELZ, which was derived from the team members' names: Kameron Madley, 13, of Oldsmar – he is the "KA"; Weigley; Niles Loughlin, 14, of Dunedin provides an "EL"; and Zach Jacquillard, 13, of Dunedin adds the "Z." The group met for a few weeks at Patent Attorney Michael J. Coltz Jr.'s office in Dunedin, who served as the team's coach. The boys designed and built their robot and programmed computer software to tell the robot how they wanted it to move.

The KAMELZ team's robot took first in the RoboFashion and Dance Show against three other teams, propelling them to the national competition, Coltz said. The students used their creativity and imaginations to come up with their own choreography and synchronize a skit with the robot, said Emma Alaba, director and organizer for the event. The kids acted out a skit while the robot dances, she said. The national competition will be May 9 at Lawrence Technical University in Michigan, Alaba said, and the students are currently looking for sponsors to help them raise funds to attend the competition.

"They were absolutely terrific," Alaba said. "Now we're trying to send them to the World [competition.] And I think they can win."

There were eight teams entered in the Junior Game, which is a technical competition, Alaba said. First the teams drew a shape, but they did not know the size or shape the judges chose until during the competition. Teams were disqualified if they did not draw anything in 20 minutes. If the robot knows the paper, it is a 50 percent deduction. Those who passed that test went to the second game, where robots teamed up against each other to fight to occupy a certain area for three seconds or push the other robot off the table, Alaba said. The St. Petersburg team New Xtreme won this event. The kids on this team were Michael Garrity and Drew Davis.

There were three teams registered in Junior Exhibition, in which students made up their own project, Alaba said. They used the Lego robot kit to demonstrate a goal, such as a task like feeding the cat, she said. All teams also had to answer judges' technical questions about the math, science and programming of their robots, she said. John David Kappeler of team Brick Builders of Land O'Lakes won first place in this event.

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People who are interested in participating in next year's Robofest may call Alaba and get on a list to receive notices and updates about the event or about summer computer camps. Possible sponsors for the winning teams may also call Alaba at 447-3067.

Photo courtesy of EMMA ALABA

Kameron Madley shows off Team KAMELZ's first-place trophy and award-winning robot. The team won the RoboFashion and Dance Show division at the Robofest Competition on March 21.

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Take math, add some plastic toys, make robot

By JIM HARRINGTON

CLEARWATER – Legos, those little interlocking plastic bricks that kids used to build cars, log cabins have a great deal to do with math, geometry and science.

They're now robots in the making.

That's what Emma Alaba has been teaching students who come to her computer learning business. And assisting her with the process is Steve Nies, who operates a Web site to help Alaba's clients learn about the interaction of algebra, a little physics and robotics.

The idea behind the partnership is to give students a hands-on feel for the concepts behind such fuzzy concepts like algebra and other higher math subjects. They apply the knowledge they've learned to a moving object, like a robot.

Nies shows the students a robot and tells them they will eventually make Star Wars robot R2-D2 walk.

But first, they have to learn how ratios and other math concepts fit into the equation. At www.robotportal.net, registered users can poke around in a safe, kid friendly atmosphere where they will find other robot-enthusiasts as well as robot related Web sites.

Using Mindstorms, a robotics-teaching program put out by Lego, Alaba and Nies hope to turn on students to the future.

The outlook for robotics appears promising. A Google news search using the word "robots" brings up a host of links highlighting the technology behind such robotic-related articles including robotic hands and their implications for medicine, as well as an automobile manufacturers plans to use "humanoids" to perform menial tasks and communicate with each other.

Even Microsoft's Bill Gates recently made his pitch for robotics. In the January issue of "Scientific American," Gates writes that science is in the verge of a new industry using new technologies. The problem is that it's a "fragmented industry" with but a handful of universally accepted principles to guide it. Gates likens the current trend in robotics to the advent of computers more than 30 years ago.

That trend, as Nies sees it, should be grasped by today's students. The collaboration between Nies and Alaba is a mix of Web sites, science and math instruction, hands-on learning with computers and, of course, the plastic building blocks. The team will bring their program to a local recreation center in the summer.

Alaba especially hopes her enthusiasm will click with girls, who notoriously fall behind in science and math when they reach adolescence.

That passion for computers seems to rub off on parents and kids, said Cynthia Yevich, the principal of Blessed Sacrament School in Seminole.

The hands-on component of Alaba's and Nies' program is important. It works on the students in a curious way.

"Kids are learning but having a good time at the same time," said Yevich. Too often, youths go home and pick up the remote control.

Maybe instead of picking up the TV controller, some kids will pick up a Roomba, another robotic-inspired innovation that combines house-cleaning chores with a "Jetson" quality. The small, round disk-shaped vacuum cleaner has won over many a homeowner, both men and women, who love the machine's inherent usefulness as a household tool, but who are just as thrilled with the "wow" factor of its robotics.

Robotics will eventually, Nies hopes, be a mainstay of the Internet generation's culture.

"There's a creativity to its uniqueness."

Photo courtesy of EMMA ALABA

Ciara Myers learns the essentials of robotics, including the math and science behind computer-controlled mechanical devices.