DEBORAH ROSE/SPECTRUM

Danny Wood, 11, left, and Devon Langworthy, 13, discuss the parts they find while dissecting an old Dell Monitor at a recent session of the Robotics And Beyond after-school program in New Milford.

Robotics and Beyond at a glance

Location: 30 Bridge Street building at 30 Bridge St. in New Milford.

Offerings: Summer camp; after-school tech and design activities; weekend workshops; group gaming events; computer programming classes; birthday parties, featuring battlebots and other activities; and teacher certification.

Tuition: Tuition help is available.

How to help: Volunteer; provide knowledge of/resources for company or grant-giving programs; support giving programs that help with course development and tuition; donate equipment, such as relatively new computers and laptops; and donate gently used Lego NXT.

Background: The nonprofit organization was co-founded by Paul Chayka and Michael Morrissey in 2003. It kicked into full swing in March of 2012, with advocacy and support from Morrissey's wife, Francesca, and began offering year-round programs six months later. Chayka became the director in January of this year. Michael Morrissey remains on the board and provides support in various capacities.

Robotics And Beyond's summer camp a popular weeklong offering

One of the most popular components of Robotics And Beyond is its summer camp, which this year marked its 10th year.

The first camp — a one-week, half-day program held at Canterbury School — drew about 11 children and focused on Legos and robotics systems because "it's a great introduction and set of equipment to get kids" involved and thinking, Chayka said.

Over the years, the camp has blossomed, drawing children from as far away as Massachusetts and New York City. More than 120 students participated in this past year's summer camp, held at New Milford High School.

For children aged 5 to 9, a junior camp has been offered fsince 2012. Age appropriate activities about a variety of topics drew 33 campers this past summer.

In the camp's infancy, activities were "career relevant (and included) an industrial component, like data base collectors, environment sensors and a simulation of Mars Rover, which was relatively new then," Chayka explained.

One of the tasks was for youths to design, create and navigate a maze, which consisted of three different environmental chambers that were covered. Participants had to send their robot, carrying data sensors, through the maze, download the data when complete and then identify the three environmental chambers. They were humid, hot and bright.

"We changed ourselves every year," Robotics And Beyond co-founder Michael Morrissey, noting the group added new equipment, found the "latest gizmos and brought in people to help explain it all."

Morrissey noted how first-time attendees really get an introduction to building and specific projects. But repeat campers can decide what they want projects they want to do instead of following a particular curriculum.

— Deborah Rose

Robotics And Beyond offers varied opportunities

By Deborah Rose

As a child, Patrick Willett was like most of his peers.

He liked to play with K'nex and Legos and enjoyed taking things apart and rebuilding them.

His creativity and imagination unfolded tenfold when the youth discovered Robotics And Beyond, a nonprofit science and engineering education organization based in New Milford.

"I loved it. I was like a kid in a candy store," Willett, now a junior studying electrical engineering at Northeastern University, said of his first experiences at Robotics And Beyond as an eighth-grader. "I came in and I never wanted to leave."

That's a common feeling among the youth who attend RAB's programs.

"It's really where I can lay out my ideas and start working on them," said Ryan Fitzgerald, a sixth-grader at Sarah Noble Intermediate School in New Milford. "They have all the tools.

"I love working on robots and useful inventions that will help me or anyone else in some way.

Willett cited one of his creations — a remote-control robot that serves as a weed whacker.

Robotics And Beyond was co-founded in 2003 by Paul Chayka and Michael Morrissey who, at the time, were individually starting up a robotics summer camp and junior robotics lab, respectively.

After discovering they had common goals, they teamed up to create one organization focusing on science, technology, engineering and math activities for children.

"Robotics is the perfect food to expose kids to wide variety of STEM methods," Chayka, RAB's director, said in a recent interview at the group's office at the 30 Bridge Street building.

Open houses are planned for Dec. 9-10 and Dec. 12-13 from 10 a.m. to 3 p.m., Dec. 11 from 10 a.m. to 8 p.m. and Dec. 14 from noon to 8 p.m. (see press release, Page S10).

The organization offers hands-on projects, workshops and other activities for students to create, design, develop, implement and test their own ideas.

"Over the years, as resources in schools have diminished, it has increased our drive to provide more opportunities — deeper opportunities — for more young people," Chayka said. "We've created a highly technological world for our kids to live in. To thrive ... to be the best in that world in their future, it will benefit them to have, if not a deep knowledge in, at least an understanding of and an appreciation for fields and physical objects and careers that involve design, software, electronic devices and communication."

Bins with batteries, electronic components, Legos, P-lax motors, plastic tubing, computer components and other items are among the items used by youth while attending programs.

The other tools are brainpower and imagination.

A large space in the center of the room serves as a work station where youth may gather to play a popular computer game, Minecraft.

Chayka describes Minecraft as a "creative, design, problem solving and interactive game" that youth play via the Robotics And Beyond server.

"We use Minecraft to get kids into learning programming language," said Chayka, who holds a master's degree in material science and has worked in all facets of engineering, including aerospace, optics, biotechnology and more.

"I love that I can learn how to do programming," said Corrine Jones, 15, who now serves as a mentor for Minecraft game nights.

Chayka noted children can learn computer programming language at young ages, like 7 or 10. "They're totally capable of assimilating what adults think are complicated."

Youth also are well equipped to teach one other.

At Robotics And Beyond, middle and high school students create and teach programming classes, as well as serve as mentors for many of the younger students.

"It was very cool working with students," said Willett, a former mentor, citing his ability to "totally relate" to the younger students while also serving as a teacher.

"The mentors are very helpful (and) have different capabilities," said Ryan, who attends numerous programs and is a mentor for the soldering class.

Chayka cited the positive peer relationships that form from the mentoring process.

"The age similarities and mutual connection to technology just breaks down barricades," he said.

Robotics And Beyond also offers internship projects for youths who express interest in such projects, as well as for students who exhibit qualities that lend themselves to internships.

Willett credits RAB for providing the "starting point to the question, 'What do I want to do with my life?' "

He said Robotics And Beyond is for children who have varying interests.

"That's the beyond in the name," Willett said. "There are so many opportunities."

"It's exceeded what I thought (the group) would do," Morrissey said of Robotics And Beyond's growth.

He credits Chayka's commitment, especially in recent times, for the group's growth.

"Paul is so instrumental this year," he said. "He's carried the full weight of the organization."

For more information about Robotics And Beyond, call 860-944-6175, visit www.roboticsandbeyond.com or stop by the office at 30 Bridge St., Suite 204.

Save the dates for these Chamber events

Dec. 19: Business Scene, informal networking opportunity for business people, 5:30-7:30 p.m. Sponsored by Webster Bank, New Milford Spirit Shoppe, the Silo/Hunt Hill Farm and the United Way of Western Connecticut at The Silo, Upland Road, Northville section of New Milford. Unwrapped toys accepted for holiday toy drive.

Dec. 21-29: 26th annual hands-on train display for holidays, noon-4 p.m. except Christmas day. Railroad station, Railroad Street.

Jan. 25: Greater New Milford Chamber of Commerce's 16th annual Crystal Winter Gala, 7 p.m. Black-tie optional dinner-dance to be held at Candlewood Inn in Brookfield. For more information or an invitation, call 860-354-6080 or email nmcc@newmilford-chamber.com.

July 5: New Milford Fourth of July fireworks celebration for Fourth of July. Rain date — July 6. Village Green. Donations, with a memo "fireworks," may be mailed to GNMCC, 11 Railroad Street, New Milford, CT 06776.

July 25-26: 47th annual Village Fair Days, 10 a.m.-10 p.m. Village Green. For more information or to be a vendor, contact the Chamber.

The railroad station is at 11 Railroad St. in New Milford. For more information, call 860-354-6080, email nmcc@newmilford-chamber.com or visit www.newmilford-chamber.com.