

## Students, robots think for themselves

By: **RACHEL CANELLI** (Sun, Sep/25/2005)

Middletown - By the time students are finished Chris Odom's computer programming and robotics class at George School this year, they should be able to make robots think.

It doesn't sound like rocket science - but it actually is.

Before, navigating a robot without a remote control was a job for NASA on Mars, Odom said. But he's hoping with the help of his new textbook "BasicX and Robotics: The Art of Making Machines Think," it will be a project for everyone.

"There's very few manuals out there to keep people up to speed in robotics," Odom said Wednesday afternoon, as students in his class started programming their robots. "This [textbook] is the marriage of hands-on robotics plus computer programming."

Published three weeks ago by Robodyssey Systems in Trenton, the text is being used in Odom's class and at Mercer County Community College. The FBI even purchased a copy, he said. The book is not in stores yet, but Odom hopes it soon will be.

A former rocket scientist at Clemson University in South Carolina, Odom started the 350-page book about two years ago. He's been teaching at George School, a private Quaker institution, for four years.

But just because Odom was a rocket scientist doesn't mean you have to be one to understand his book.

"I wrote it like a teacher [looking] over your shoulder," Odom said.

Last year, his students helped edit the text to keep it easy to understand. They even made a few suggestions.

In fact, 18-year-old Catie Kelly, a 2005 graduate, is the consulting editor of the book.

"Working with robots made math feel alive," she said while visiting Odom on Wednesday. "It was really fascinating. Halfway through the year, I was like, 'Oh man, he's actually teaching me.' "

Odom, who claims to be the first kid on his block who had a computer, refers to himself as a nerd. But Kelly said she found his enthusiasm contagious.

"He's always excited and he catches everybody else's attention," she said. "It makes you want to learn. But he lets you discover yourself too. Once you learn the language of the robots, there's an infinite amount of things you can do."

The robots are as smart as you are, Odom told his class as he demonstrated a small circular robot that navigated its way around a table without falling off.

Students received a robot and are expected to make it think, dance, write or whatever creative idea they come up with by the end of the year.

"The idea is really to teach robots how to think," he said. "It's not just about robotics. Students leave with a real fundamental grasp of computer language programming," he said, adding that the essence of the class is math and science and the robot is a plus.

"[Kids] can program a car or computer, medical treatment machine or airplane," Odom said.

Or even become rocket scientists.

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