



**Glocester**

## **Home team robot champs**

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**By Philip Marcelo**

**Journal Staff Writer**



**GLOCESTER** — The task for Chepachet brothers Kyle and Shane Inman and their eight friends the past five months was twofold: design a robot out of Legos that would complete a set of specific actions, and come up with an innovative way of using nanotechnology to fix everyday problems.

Kyle, 13, owned a set of the specialized Legos used to construct the robot and the computer program that controlled its movements, so he worked with a small group of friends designing, building, and programming their own Lego machine.

Shane, 11, worked with the rest of the group learning about nanotechnology and creating a group presentation on how it might be applied to help those suffering from peanut allergies.

The brothers and their friends, who hail from Warwick, Cranston, Barrington, and North Providence, completed their task and did it better than anyone else in the state.

The Inmans were members of the Engineers of Tomorrow, the team that won the state FIRST LEGO League Robotics Competition, held on Saturday at Roger Williams University in Bristol.

The eight-year-old competition is run by For Inspiration and Recognition of Science and Technology, or FIRST, a New Hampshire nonprofit that challenges youth groups to make functional machines out of the LEGO Mindstorms series, an advanced line of the familiar Danish plastic toy blocks that incorporate light, touch, and sound sensors, and computer hard drives and software.

In April, the winning team, all but two of whom are homeschooled, will fly to Atlanta and face teams from around the globe in FIRST LEGO League's Nano Quest World Festival, which brings 104 teams to a two-day competition at the Georgia Dome and the Georgia World Congress Center.

Until then, the team will be raising money for the trip and refining their robot, even though, Shane jokes, "basically all the teams will be better than us."

It is the team's first victory after three tries in the state competition and the first victory for a group of largely home-schooled children in the annual competition, which is in its fifth year, according to team organizer Mary Johnson, of Warwick.

With a Roger Williams University professor of mechanical engineering as their mentor, Kyle and the rest of the team built a three-wheeled robot that completed much of a 2½ -minute obstacle course filled with small tasks, before breaking down.

Shane helped design props and costumes for a skit about how nano-sized filters could be used to trap and neutralize peanut proteins before they came into contact with an allergic person.

The purpose of FIRST LEGO competitions is to expose children to engineering and science and its uses in modern life.

"It is the idea of getting kids to be more aware of science as consumers and paying attention to science as a part of everyday life and not just something you read in textbooks," Johnson said.

Challenging young participants to see how science is applied was the reason behind the research project in the field of nanotechnology, which is the fabrication of technology that can only be measured in nanometers, or units of measure equivalent to one billionth of a meter.

"It goes beyond just liking to build Legos," Johnson said. "These kids had to deal with the frustrations of not having the robot do what they wanted it to do." They learned to solve those problems largely on their own and while living within the parameters of the competition, she said.

This year's competition brought out 48 teams, with children ranging in ages from 9 to 14. Teams competed in four areas, robot design and programming, robot performance, research, and teamwork and gracious professionalism.

The team with the highest cumulative score earned the right to represent the smallest state in the union on the international stage and \$1,000 to cover its entry fee.

The Engineers of Tomorrow have to raise \$10,000 to for the Atlanta competition before April. Johnson said the team plans to tour the state with its robot and research presentation to help defray travel costs. They plan to hold a fundraiser over the coming months and are looking for corporate sponsorship.

For more information on the team and FIRST LEGO League, visit [www.engineersoftomorrow.com](http://www.engineersoftomorrow.com).