

Contest has students building robots from scratch

By Jane Roberts (Contact), Memphis Commercial Appeal
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When it comes to sheer engineering feats, Noah may have had it easier.

He at least had dimensions, presumably wasn't daunted by a cubit and didn't plan to compete in any seaworthiness contests.

At Booker T. Washington High, the race to build a robot capable of competing in a distant city in a game that's part soccer, hockey and basketball is shaping up to be every bit the challenge.



Dave Darnell/The Commercial Appeal

Booker T. Washington High School students (from left) Quinton Dates, Aysahn Roach and Antonio Ferguson work Tuesday with Hamilton High School teacher Roy Shears on the robot the youngsters are building.

Not only are there no directions, the robot and its attached trailer must operate in zero-gravity resistance and must be packed and shipped by Feb. 17. And oh, yes -- someone's going to need to build a shipping crate.

"It's like being told to dig a hole, but they don't tell you if you need a shovel or a backhoe," said Kenneth Shipp, one of about a dozen Medtronic engineers spending lunchtimes, afternoons and Saturdays helping three groups of Memphis public school students engineer a big chance.

While the students have to ship 130 pounds of robotics in a matter of days, they can hold 40 pounds back for tinkering. They also have a \$2,600 discretionary account. The question is, what to hold back and what to buy?

"We have to strategize and optimize," said Greg Marik, senior manager of product development at Medtronic, which gave \$32,000 to get Memphis city students in the contest, picking up the tab on robotics kits and registration at the regional meet in Minneapolis.

The contest, coordinated by FIRST -- For Inspiration and Recognition of Science and Technology -- was founded in 1989 by Dean Kamen, creator of the Segway.

"We're definitely interested in workforce development," said Cheryl Walsh, FIRST spokeswoman. "The impact is that many of our participants go into science and technology."

On Tuesday after school, Shipp and a cluster of students from BTW, Fairley and Hamilton high schools were scratching out wheel-base calculations and strategies for their robot.

"It only took about five minutes to do the programming; loading it up is what is taking all the time," said Terry Gill, 16. "I wanted to get into robotics. This is my first chance."

The students, from high-poverty inner-city schools, are divided into teams, including marketing and fundraising, because there's still \$37,000 to raise for travel expenses.

Without Medtronic, there would be no event, says Jada Askew, district special project coordinator.

"If you were a student in a school always in the news for not making the grade, how would you feel?" she asked. "Now, you have an opportunity to show your school in a positive light. You jump at the chance."

Shipp sees a group of students in many ways more serious, he said, than he was before heading off to Georgia Tech.

"What surprises me is they show so much promise," he said. "Some have asked me about mapping out a career in engineering. I give them my words of wisdom," including that on a toughness scale of one to 10, "engineering is a 10."

But, he adds, "I got out of school in 1983, and I've never not had a job."

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