

ASFMS Robotics Team at the Roger Williams University Challenge



Jessica Selby-Daily Times

Above: Representing West Warwick are Crystal Greco, Danny Romano and Steven Russell.



At left: Jake Huling, 7th grade, Cian Martino, a 6th grade, Austin Gill, 8th grade, Trevor Campbell, 7th grade Alec Ballotti, 7th grade, and Ben Jackvony, 6th grade, from the Ala Shawn Feinstein Middle School, all came together to join in the quest to master the Lego League challenge.

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A dozen or so local students will be among the technological gurus that will be converging at Roger Williams University this weekend.

The youngsters are part of a growing population of robotics enthusiasts that will be taking part in the annual Lego League Robotics Challenge. This year's event, the Body Forward Championship Tournament, will be held on Saturday, January 15th.

A group of middle school students from the Alan Shawn Feinstein Middle School of Coventry and another group of students from West Warwick will be participating in the event with close to 600 other 9 to 14 year olds from schools across the state and nearby Massachusetts.

The 59 student teams will be vying for awards in categories such as Robot Design, Robot Strategy, Research Quality, and Teamwork.

They were all given tasks ahead of time such as exploring how to heal or repair human body systems with biotechnology and biomedical engineering. They also designed, built and programmed a robot to complete missions on a pre-built game table where the missions represent concepts from biomedical engineering.

Each of the teams will have two-and-a-half minutes to earn points as they demonstrate their robots ability to complete the tasked missions on the

playing field, which is made entirely of LEGO elements.

Each team is also required to present a research project on their topic relating to Bodies Forward that highlights what they have learned about saving and improving lives with biomedical engineering. The students will present their knowledge to a panel of volunteer experts from the community, including representatives from Alexion, Brown University, XiMedica, Naval Undersea Warfare Center, KVH, and Simulia.

The team that earns the highest cumulative score across all judging categories wins the coveted Champion's Award and advances to the FIRST LEGO League World Festival, where they will compete alongside teams from 30 countries.

The team from West Warwick said that they are confident about their ability heading into this year's competition. Each of the team members has several years of experience with the competition under their belts.

Danny Romano and Steve Russell, both ninth graders at West Warwick High School, have participated in the Lego League competition previously and said that just being familiar with how the competition works and what type of things the judges are looking for make this year's challenge that much less stressful.

The team also has an 11th grade student from the high school that has returned to the

group this year to serve as a coach and an eighth grade student, Austin Raymond, who has previous experience with robotics.

The team's head coach, Roland Hebert, is a retired technical education teacher. For the past ten years he has been working as a robotics coach with various programs. In addition to the student's confidence, Hebert said that he too thinks that his students will do well in this year's challenges. He said that he knows that the students have put in the time and feels it will pay off.

He said that the group begins meeting in September. They come together one day a week for nearly two hours. They gather in a computer lab at Deering Middle School, but the program is not a school sponsored club. Hebert said that he wrote a grant to secure funding to support the after school program and submitted it to the Kent County YMCA, which has for the past several years, committed to supporting the club with the financial contribution.

Looking ahead to Saturday, the students said that they know they do have a few last minute things to finish up, but think that they will generally do OK, they said.

The West Warwick team said that they came to a common agreement on the design of their robot fairly quickly and had each individual member work on attachments to com-

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work on attachments to complete each of the tasks assigned as part of the robot challenge.

The project, though, they said, was a bit more difficult to agree upon. Originally they said that they wanted to do their project on skin and related subjects, but had trouble tracking down enough information. In the end, however, they said that they decided to do their project on bone fractures and treatments. Through their research of the project, the team members said that they have found many different facts on the topic including the fact that "some fractures can be set by using a cast while others require pins and rods," and that "there are some common since things that can be done to prevent fractures and new methods and materials being researched to help repair them."

"I think that we are going to need to work on our project a little more before we go to the competition on Saturday, but I think we are going to do pretty good with our robot and that part of the challenge because we are all pretty familiar with programming," Danny Romano said.

The group from Coventry is also feeling fairly confident this year. The team this year is made up of both veteran Lego League competitors as well as newcomers with some fresh ideas.

Jake Huling, a 7th grader,

Ciana Martino, a 6th grader, Austin Gill, 8th grade, Trevor Campbell, 7th grade, Alec Ballotti, 7th grade, and Ben Jackvony, is in 6th grade, all came together to join in the quest to master the Lego League challenge. The club is formed in September and the members said that there were a few other members at first, but that some dropped out over time.

In the end it was just the six members that stuck it out until the challenge. Being a part of the group and completing the tasks assigned as part of the competition can be quite burdensome, according to the students, but they all said that they do it because they enjoy it.

Participation is completely voluntary as the students are part of an after school club. They meet twice a week for about an hour each day. During those sessions the students said that they go over plans for their robot, discuss project progress and operate practice runs on their robot.

"It's not easy because you have to program your robot and although some of us have knowledge of programming not all of us do and so it's not like you can just tell your robot to go one foot to the right and then turn left, you need to program it using exact measurements and you have to build attachments that will help it to complete certain challenges, and no matter how many times you do it and it does it right, it always seems

like there is that one time that you do it when it really counts and it completely fails and that can be really frustrating," Huling said. "Then when you have a challenge that requires more than one movement, it makes it even harder because you have to know exactly how much power to program the motor with. It is a lot of guess and checking and that can be really annoying, but interesting at the same time."

The group's coach Rebecca Henderson, who is also the robotics teacher at the school, said that this year's team is a "very dedicated group."

"You know we don't even have this equipment that these kids are using for this competition in our classroom so it's not like the ones that are in my class have an advantage, they are doing most of this on their own time and teaching themselves because they have the programs at home," Henderson said. "They are a very dedicated group and I think that they are going to do well because of that."

The students will all find out exactly how well they will do on Saturday. They will all arrive at Roger Williams University bright and early and spend the entire day competing in various aspects of the competition.

The final scores will be revealed at the end of the day's competition and we will have those results in next week's paper...stay tuned and good luck to the local competitors.