FIRST Robotics Team Impresses Congresswoman

by Gerald Scott
News Dept.

U.S. Rep. Candice Miller took time out of her busy schedule the other day to meet with FIRST Robotics high school team No. 1718, the Fighting Pi, at a demonstration event in Romeo.

The function was held at the Ford Romeo Engine Plant, which sponsors the team and provides it with robotics storage and assembly space, as allowed for by FIRST rules.

It was Congresswoman Miller's first visit with the team, which made a Powerpoint presentation to her in the Administration Building and she came away impressed.

"That's a better slide show than I typically see in Washington, D.C.," she quipped.

Team 1718 is now up to about 30 students and they have proven to be a self-motivated and successful bunch.

"We were founded in 2006 over at the Macomb Academy of Arts & Sciences," said team leader Richard Graham, of Richmond High School.

"Since our rookie year we've grown to about 30 students, after having started with about 15," he added.

"Our mission is to inspire students to pursue their interest in science and technology."

FIRST Robotics is a promoter of STEM – Science, Technology, Engineering and Math curricula for high schoolers.

Also, participating in the formal presentation to the Congresswoman were students Melissa Mikolowski (Armada HS) and Nicholar FitzSimmons (Richmond HS).

"And also business," Graham said. "We've been doing that since 2006. We've met with remarkable success the past two years – in 2010 we made it to the World Championship for the first time since starting in our rookie year.

"We also won the Chairman's Award, which is the most prestigious award you can get. It recognizes the team that is a 'role model' for the other teams. We also made it to the World Championships again and we hope to duplicate it for this year."

The students study the theories and achievements of Dean Kamen, the famous inventor, scientist and founder of FIRST Robotics.

PHOTO: GERALD SCOTT

U.S. Rep. Candice Miller checks out the movement of the FIRST Robotics device assembled by the "Fighting Pi," the high school robotics team sponsored by the Ford Romeo Engine Plant.

Curiously, Kamen is almost as successful an inventor in the modern era as Thomas Edison was in his era, but he's hardly a household name.

Kamen, for example, is working with the Dept. of Defense on developing artificial, working hands for soldiers who have lost theirs from wartime explosions.

Luckily, though, more and more high school students, including those that participate in FIRST Robotics nationwide, are becoming familiar with Kamen and his achievements.

Without Kamen, there wouldn't be all of these FIRST Robotics regional and national competitions to charm and engage local high school teams like the Fighting Pi.

"There's a popular phrase going around that says 'Innovation Stagnation.' It's the goal of FIRST to end that," student Graham pointed out.

Replied Miller, "That's true, that's very true – we're counting on all of you to do that because my generation hasn't done such a good job, you guys have to take it over, I'm telling you."

PHOTO: GERALD SCOTT

Note that the robot built by the FIRST Robotics team sponsored by the Ford Romeo Engine Plant, scored a basket on this very shot from the field as it was directed by student programming.

Miller went on to witness a demonstration of the Team 1718 robot, one that was programmed to scoop up basketballs and shoot them at a standard basketball hoop. That's all more difficult than it sounds – to program a robot to score a basket, but the Fighting Pi did just that.

The FIRST Robotics championships will be held next month in St. Louis and the local team, based at Ford Romeo, has to go through district and regional play, but they appear to stand a good chance of returning to the big show as far as high school robotics is concerned.

Team 1718 has two faculty advisors from the Armada Schools including Craig Roys and Richard Wahl. The latter is a retired U.S. Air Force pilot who flew F-4s, F-15s and was a T-38 jet training instructor. Together they have launched local student interest in STEM.

Ford Engineers Talk Up 'Pi Day' to Area Students

DEARBORN – March 14 wasn't just another day on the calendar for Ford engineers. To them, and to many other math fanatics around the world, that day is Pi Day (3.14 day), a day recognizing the role mathematics has in everyday life. At Ford, math plays a critical role in developing smarter, safer and more fuel-efficient cars like the all-new Fusion.

"When someone sees an all-new Fusion driving down the street, what they're really looking at is a mathematical machine processing thousands upon thousands of equations every millisecond," said Gil Portalatin, Ford Motor Company product development engineer.

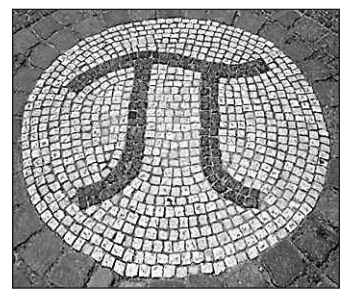
"Without math, the Fusion is a completely different vehicle from the way it looks to the way it drives."

Ford engineers aren't just keeping the celebration of math inside the walls of the company's research and product development facilities in Dearborn, Mich.; they are spreading Pi Day cheer to the World Wide Web and local schools.

So, last Wednesday, March 14 at 11 a.m. EDT, Ford engineers actually posted a different math equation every 3 minutes and 14 seconds to www.reddit.com and ask the community to solve each one. The first person to correctly answer one of the 42 total equations wins "Reddit Gold," which gives users special exclusive features for their online account.

In addition, Ford engineers are letting high school students see firsthand how math was used to develop the all-new, 2013 Ford Fusion. Students from the innovation-focused Henry Ford Academy and Henry Ford Academy: School for Creative Studies in the Detroit area heard Ford engineers talk about how math helped shape the car. The students were then challenged to answer three mathematics equations using actual measurements from the car.

Last Wednesday was March 14, or 3/14, a significant day for engineers because that represents the first three digits of Pi, the mathematical constant – 3.14159. . . .and so on. At Ford, engineers teamed with high school students to learn how the automaker used math to develop the 2013 Ford Fusion.



The symbol for Pi is worshipped not just at Ford in Dearborn, but around the world. Here, the lower-case Greek π denotes the constant. This mosaic is outside the mathematics building at the Technische Universität Berlin.

Meanwhile, the all-new Fusion is expected to deliver best-in-class fuel economy. The hybrid version will offer at least 47 mpg in the city, a rating that wouldn't have been possible without the key role math played in its development.

"We used math to make the Fusion more aerodynamic, to reduce its rolling resistance and to find the right inflation point for the tires," said Portalatin. "Then we used math to figure out the Fusion's fuel economy, or miles per gallon, by taking distance traveled by time and dividing it by the amount of energy used."

The all-new Fusion offers a wide portfolio of driver assistance technologies.