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Newton High School's Robotics Team Hosts STEM Night

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NEWTON, NJ – Aperature, the Newton High School FIRST Robotics team showed off its robot on Thursday night at the school. The sixth annual STEM night was highlighted by the yet unnamed robot performing some of the tasks required for this year's

competitions.

A crowd of family, friends and supporters first gathered in the hallway to watch the bot catch an oversized gear, carry it across the room and place it on a pipe. It also grabbed a rope and pulled itself off the ground, to the delight of several young children assembled there.

The group moved to the art/STEM rooms where a spread of food and dessert were available. The team made a presentation during dinner, introducing the team members and this year's FIRST challenge.

This year's Robotics Competition game is called FIRST STEAMWORKS recalling an era of steam engines and air ships. It is comprised of three challenges, each requiring the bot to perform different tasks for different point values.

Aperature has decided to focus on two of the three challenges. "We decided we could be a jack of all trades and master of none so we decided to master two," Team Build Leader John Bugay said.

Coach Jim Hofman gave some welcoming remarks. He thanked their supporters including Pat Mulvoy from Thorlabs and Najah Davenport from Picatinny Arsenal before turning the program over to the students.

As the team members introduced themselves, they explained their role.

Katie Nelson is the Administrative Manager, in charge of Logistics and Co-Captain

John Bugay is the Build Leader who works closely with the CADD Leader. Bugay gave an overview of STEAMWORKS

Josh Virtell is the Electrical Leader

Cameron Osborn is the CADD Design Leader

Ben Austin did the carpentry work building the field pieces

Brandon Marenzana manages the Cost Accounting Worksheet or CAW

Nick Nannery is the Safety Team Leader. This year in addition to the usual safety planning and training Nannery conducted CPR and AED training for Newton and other school's teams, earing competition points.

Liam Oakes is the other Co-Captain, heads up Public Relations creating the newsletter as well as overseeing the creation of the Business Plan on the business team. He also spoke about the team's political initiative of lobbying for Varsity status for all high school academic teams. This effort is close to bearing fruit with Senator Steve Oroho's sponsorship of legislation for this issue.

Derek Ravshanov outlined the team's fundraising efforts including reaching out to 600 buisnesses, an effort that yielded $2000 to date.

Caitlin Bailey is the team's visual arts leader and web designer. She is also a leader for the Kids Come FIRST program.

Carter Boyd explained that he is one of the team members who has "never touched a robot." Boyd's talent is in marketing serving as the team leader for Marketing and Awards.

The team recognized MIRA Plastics with a plaque for their support in getting a shed at the Sussex County Fairgrounds. "Tina Miragliotta is the most spiritual person I have ever met," Oakes said. "Her enthusiasm is infectious." Oakes noted they also provided a kick-off bagel breakfast as they started their new season.

Anthony Miragliotta, accompanied by his daughter, accepted the recognition on behalf of his sister and their company.

Hofman was presented with a team jacket from the students. "He has his own family, yet he chooses to be here with us," said Nelson. Noting the team spends five days a week for several hours after school creating the bot and preparing for competition. Nelson even works with the students in the summer preparing for the next season.

For FIRST competitions the teams are scored not only on the bot but by the business plan, build and safety journals, outreach and fundraising efforts, web design, public relations and marketing efforts, comradery and more.

FIRST has many award categories including Entrepreneurship, Woodie Flowers, Chairman and Digital Animation.

According to the team they have recorded "763 hours with kids in the STEM labs or at the events." Their outreach to the community includes visits and demonstration to Bristol Glen, Lowe's, Sears grand opening, Newton, Andover and Green Township Demo days and a number of school.

They also support various charities and hold charity events such as serving meals at Manna House, pet drive for Father John's Animal house, Project Self-Sufficiency toy drive, participation in Autism Awareness day and Walk Now for Autism Speaks and Newton Pride Foundation 5K.

The team supports and mentors younger students to build for the future. They trained, refereed and provided FIRST tables at the FIRST Lego League event at Sparta Middle School last fall.

The talented seniors on the team are beginning to look ahead to the next steps in their educational career.

Oakes will be attending Seaton Hall to pursue a degree in Business.

Nelson will be attending University of Rhode Island to study pre-med in pursuit of a biomedical engineering degree.

Maddie Mitchell plans to attend County College of Morris to study Criminal Justice.

Victoria Viersma has not yet decided where she will attend but plans to stay close to home.

Boyd, yet to decide on a school, plans to study political science and history, minoring in English or philosophy.

Brian Hoskins also waiting to choose a school is excited about pursuing Mechanical Engineering with an eye on Robotics as a future career.

Alex Duckworth plans to attend Elizabethtown College in Pennsylvania to study international business and Spanish.

Katy Van Orden will attend Rhode Island Technical school to focus on engineering.

Once the game is announced at Kit and Kickoff events. They are given six weeks to build the bots and the competitions begin in March. After a six-week competition season, qualifying teams move on to championships in Houston, TX and St. Louis, MO.