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Bird High School robotics team hosts competition kickoff



From left to right, Convergence Team members, Reece & Clay Webb, Kaylee Pantaleo and Rachel Head. Reece toured Auburn with his brother Clay which made him want to go into Aerospace Engineering. [Kristi K. Higgins/progress-index.com]

By Kristi K. Higgins, Staff Writer

CHESTERFIELD — Squads worldwide held kickoffs last Saturday to launch the 2019 FIRST FRC Robotics Competition Season. Nearly 100,000 high school students on 3,790 teams — along with mentors and volunteers consisting of STEM (Science, Technology, Engineering and Math) professionals, educators and parents — anxiously tuned in to watch the unveiling of the 2019 space-themed challenge televised live from Manchester, NH.

The robotics team at Lloyd C. Bird High School, RoboHawks #346, hosted a kickoff. Accompanied by their mentor, Dr. Bruce “Doc” Davies, CEO and Director of Chesterfield County’s MakerSpace, two other local teams attended who assemble their robots at the Chesterfield Career & Technical Center on Hull Street: Resurgence #1080 and Convergence #7429.

According to Davies, Resurgence is made up mostly of home-schooled kids and are based at Flexicell Inc. in Ashland. Convergence is open to any student in Chesterfield County; the team, along with their coach and lead mentor, Paul Lathrop, welcomes new members.

The three teams watched the DESTINATION: DEEP SPACE game field and challenge details for the first time together. The broadcast included videos that described their new mission. They had a limited time to design, build, program and test their robots to meet the season's engineering challenge.

Once the password was revealed to unlock the game manual, students split into focus groups to determine how to go about scoring the most points. Teams will participate in one or more of the global 173 Regional and District events that measure the effectiveness of each robot, the power of collaboration and the determination of students.

According to Dr. Nancy Hoover, coordinator of the Governor's Academy of Engineering Studies at L.C. Bird, "The game starts ticking and each student gets involved in some way to build the robot. They have decisions to make that will impact the game, and they create elaborate ways to score points." Hoover said students ask themselves, "How can we score points, and what's a good strategy to score points efficiently to win a match?"

The three teams continued working through Saturday afternoon. Their commitment continues for the next six weeks. Teams select two district events to attend. Their combined scores from the two competitions determine whether they move onto the District Championships. If they gain enough points, they advance and compete at the World Championships which will be held in Houston, TX and Detroit, MI this season.

"The kids that get involved and embrace it ... I wouldn't even want to quantify the things they learn," Hoover said. "You just can't teach it in a classroom. They learn skills on so many different levels: project and business management, the 4 C's (communication, collaboration, critical thinking and creativity) and software skills."

According to Hoover, the RoboHawks have a budget of \$26,000, which the school does not provide. They have different marketing and communication teams that help locate grants. FIRST Robotics provides some common supplies across all teams, but each team decides what type of material to use to create their robot.

Watching on Saturday, RoboHawks volunteer Kae Elliott said, "This is amazing, and it gets me emotional. My son, Brendan, is very shy, and when he was in ninth grade, I remember sitting in these meetings and observing my son in the build sessions. He kind of kept to himself and wasn't super involved. And now, because of the mentors and teammates, he is pretty much in charge of the strategy along with another student. Just to see how passionate he is about it is just amazing. ...He texted me last year from his first competition to say that he 'finally, felt important'"

The Progress-Index interviewed L.C. Bird alumni Adam Morrissett, who was on the RoboHawks team all four years at Bird. When Morrissett was on the team, he was the only member that had the responsibility of programming the robot.

Morrissett shared, “Being in the Engineering Specialty Center, I was already interested in robotics and the whole engineering field, but I wasn’t sure exactly what kind of engineering field I wanted to pursue. Participating with the RoboHawks gave me an opportunity to try out mechanical and electrical engineering, computer science and other things like that. After trying out all of them, I knew in the future I wanted to be involved in a mix between electrical engineering and computer science.”

Morrissett said, “FIRST Robotics has a pool of money they use to reward scholarships to participants. I was offered one, but I couldn’t double-dip scholarships, so I selected a different one presented to me by VCU. I without a doubt got selected for the VCU scholarship and accepted to their university because of being involved in RoboHawks. I, also, served as an intern at Alstom Power the summer after my freshman year at VCU and have Paul Elkovich who was a lead mentor to thank for getting me through their door.”

Morrissett added, “I mentored the RoboHawks for three years while I was in college, however, the work got to be too much, and I had to devote more time to my studies, however, I still volunteer with the FIRST® FRC Robotics competition. Thanks to the invaluable experience on the RoboHawks team, I completed my undergrad in computer engineering in May, and currently, I’m pursuing my Ph.D. in electrical and computer engineering. I can go into academia and be a professor or researcher, but I would prefer to go into industry. I like research so will be looking for companies that have autonomous control systems research and development labs.”

Morrissett responded when asked what his response would be if students asked him, if they should join the RoboHawks, “Yes, because there are so many advantages. Students can learn a variety of technical and non-technical skills that will help them regardless of where they go in life. And, the material is presented in a hands-on manner as opposed to the traditional classroom setting, so it would greatly benefit people especially those who learn from doing.”

Not present at Bird’s kickoff was Hopewell High School’s robotics team, Bionic Blue Devils #7756, who will also be competing in the 2019 FRC FIRST Robotics Competition Season.

All competitions are free and open to the public. Visit www.firstchesapeake.org to view a schedule for the Chesapeake region: District of Columbia, Maryland and Virginia.

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