

Chairman's Award - Team 195

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2020 - Team 195

Team Number

195

Team Name, Corporate/University Sponsors

United Technologies / REV Robotics / Ametek-Hayden Kerk Motion Solutions / Lockheed Martin / Mohawk Northeast / Pyramid Technologies / Tiger Enterprises / JH Metal Finishings & Southington High School

Briefly describe the impact of the *FIRST* program on team participants within the last five years.

Both FIRST and the CyberKnights teach members to solve problems and manage time, as well as the importance of gracious professionalism. Most CyberKnights begin their FIRST career in FLL, which allows a smooth transition into FRC by giving them a basis of STEM. By the time they graduate the team, 85% of the alumni pursue a STEM position, some even at a company that sponsors Team 195. Alumni show their commitment to FIRST by mentoring 12 FRC Teams in order to give back to FIRST.

Describe the impact of the *FIRST* program on your community within the last five years.

This fall, we hosted our 2nd annual STEM for All event. Over 400 people of all ages came to participate in various STEM stations. A retirement home in Southington even took a bus trip to experience it. We also invited the founder of Guiding Light Orphans to spread awareness of the limited access girls have to education in Uganda. Additionally, we asked the Town Council members to join us at STEM for All. We gave Chris Poulos, town representative, a tour of the event and told him about our team.

Describe the team's methods for spreading the *FIRST* message in ways that are effective, scalable, sustainable, and creative.

The CyberKnight's method for spreading the FIRST message is to reach out to those who otherwise would not be able to engage in FIRST. For that reason, we contacted veterans, elderly citizens, and orphans in Uganda. Also, our personal message of STEM for All is important in growing the idea of FIRST throughout the world. Because of this, we started an FTC team for children on a military base in Turkey. Team 195 is constantly working to expand the ideals of FIRST and STEM for all.

Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

Team 195 sets an example of gracious professionalism by lending a helping hand. Each year, before competitions begin, we invite other FRC teams to use our full size practice field. Moreover, we encourage other teams to utilize our manufacturing space. We share our scouting system, as well as our design, programming, and media production with others. Our mentors have even given presentations on programming and travel information at NE FIRST University Day.

Describe the team's initiatives to help start or form other FRC teams

Team 195 shares advances in STEM and the FIRST community with our state capitol in the hopes that the government will provide funding for more FRC programs. We also heavily focus on supporting current FRC teams, such as team 7462 (Disruptive Technologies) and 7407 (Wired Boars). In the past year, we have worked alongside these teams to ensure a successful season for them.

Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)

Team 195 has started many FLL teams at the Southington elementary and middle schools. This year, in order to expand our program beyond Southington we created an FLL Jr. team at local store, Bricks and Minifigs. We invited children from other towns who have limited access to STEM to learn alongside kids who have the same passion. Based on this, we have directly impacted about 50 kids in their everyday life!

Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program

While these FLL teams are in session, we mentor them throughout and help them with any difficulties they may have. Annually, we host an FLL scrimmage to make sure the kids have practice before competition. Our FLL Jr. team was just created this year, so we work to make sure they fully understand the concept of teamwork. Since these kids were from different towns, it took awhile for them to get comfortable with each other and work as a team. To break the ice, we did many teamwork activities.

Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)

Team 195 helps mentor a new rookie team almost every year. In the past we have helped 7462, a team from Danbury Connecticut. 5842, a team from Florida. As well as 5686, an all girls team from Simsbury Connecticut. We have helped these rookie teams get more involved in the FIRST community. We have guided rookie teams while they built their robot, provided materials and machinery, and shared our work space with other teams.

Describe your Corporate/University Sponsors

Team 195 luckily and thankfully has university sponsors and corporate sponsors. A corporate business in Southington, Mohawk, gives us a work space and \$4,000 every year! We are also given \$1,500 from the University of Hartford. We are also given the opportunity to take a tour of their school as well as tour their different engineering facilities. Many of our alumni attend UHart, and we even have a mentor that is a professor at the University.

Describe the strength of your partnership with your sponsors within the last five years.

We continually invite our sponsors to our Wednesday meetings, to our kickoff event, as well as during our build season. We even have vice presidents of companies come to see our progress. We try to reach out as much as possible. Our mentor, Lance Florian, is a sponsor of the team and is on the board for our team. We find it important to get feedback from our sponsors, so their representation on the board is important.

Describe how your team would explain what *FIRST* is to someone who has never heard of it

FIRST is a robotics competition for high school kids that teaches them the importance of teamwork, problem solving and being active members of the community. Members of FRC teams work hard to create outstanding robots, however, they do so much more. They also market their teams to possible sponsors, create videos about their community service, and aid other teams in their efforts, rather than bringing them down. They share the education that they have gained with the world around them.

Briefly describe other matters of interest to the *FIRST* judges, if any

Team 195 has been invited to our State Capital for a new event called "Manufacturing in our State" on April 16 due to our outstanding knowledge about manufacturing. The event shows the ways that CT involves robotics. Another unique part of our team is that each year for kickoff we meet at our town's Municipal Center to watch the game announcement and a hype video made by our Media team. Afterwards, all students go to our workspace to help prototype and all ideas are welcome during this process.

For FRC teams older than 5 years, briefly describe your team's broader impact from its inception.

From the very beginning, our team has focused on spreading STEM awareness to our community. We have continued to bring STEM to all, as we invite all ages to our events. Our media team has also excelled over the past five years and continues to grow as members progress in making videos to display STEM to our community. These videos and our many other efforts create a culture of STEM in Southington and spread awareness of what our team truly accomplishes.

Team Captain/Student Representative that has double-checked this submission.

Kristen Gorham

Essay

Team 195 prioritizes being a role model to competitors and promoting the mission of FIRST within and beyond our community. The team advocates that other teams are allies before they are competitors and also uses the goal of cooperation to propel team collaboration. In addition to aiding other teams, Team 195 strives to bring STEM to all. Our powerful outreach has impacted communities throughout the world, and we have spread awareness of STEM across the globe. From the youngest of the community on our FLL Jr. Team to the oldest in our local assisted living homes, here's how Team 195 sets the standard:

Team 195 runs an annual STEM for All event at the Southington Drive-In. This event celebrates STEM with a variety of interactive stations, including Liquid Nitrogen, Build Your Own Robots and Robot Demonstrations designed for people of all ages. STEM For All began in 2018 with just over 300 attendees. This year, we strengthened advertising capabilities and achieved almost a 50% increase in attendance at the second annual STEM for All event. We are looking forward to expanding the size of this event once again in 2020.

Our first FLL Jr. team, the CyberBricks, was formed in October of 2019 at Bricks & MiniFigs to engage the youngest generation. This local Lego store graciously donated a meeting space to the team of 8 students living in 7 towns that do not currently offer FLL Jr. The CyberBricks meet weekly at the store to be mentored by members of the CyberKnights. Next year, each of the student coaches will help a student in this program start a new FLL Jr. team in each of their towns. This plan allows us to introduce more youth STEM programs across Connecticut, and expand programs in our town. We currently assist 4 FLL teams at Southington elementary and middle schools. One unique implementation of our FLL program is the yearly scrimmage that we run to prepare students for competitions. The partnership is mutually beneficial; the FLL students use STEM to solve real-world problems with the support of experienced high school students, and 195 members learn leadership skills and experience the gratification of giving back.

Team 195 advocates for unification and inclusivity within the FIRST community. Our team members and mentors have regularly taken part in NE FIRST University Day by holding informative workshops covering topics such as programming, team travel, and community outreach. The strong relationships 195 has with neighboring FRC teams were cultivated from a mutual openness and teamwork mentality. The most significant way we assist teams, is by offering our full-size practice field for the FRC community to utilize throughout the build and competition season. Team members and mentors are always willing to answer questions and help solve problems that visiting teams may be experiencing. During the 2019 season, Rookie FRC Team 7462 was mentored by Team 195. We provided support and resources to assist with robot manufacturing and preparation for their first competitions. At the end of the season, Team 7462 won the Rookie All-Star Award at the Western New England District Competition and competed at the Darwin Division in the Detroit World Championships shortly thereafter.

The ability to support FLL Jr. and FRC teams derives from Team 195's diverse member involvement. Each member has experience working with a plethora of people from different backgrounds and educations. Our members cover a broad range of interests; almost half of our students play a sport such as soccer, track, golf or football. Members also belong to other activities or clubs outside of robotics, including Math Team, National Honor Society and Drama Club. Currently, our team is made up of 12 freshmen, 20 sophomores, 17 juniors, and 9 seniors, with a total of 58 team members and 29 mentors. The team is composed of 58.3% male members and 41.7% female members. By extending our outreach to young adults in the community, we have continued to build this diversity.

This year, we showcased our robot in our school's pep rally to attract high school students to STEM. The pep rally is traditionally held in support of the schools sports teams. Robotics is considered a sport in our school and it is even possible to Varsity letter in robotics now. The audience was filled with students involved in a multitude of extracurricular activities, which pitched the perfect opportunity to promote our team to young adults for the next season. Our STEAMWORKS robot was a crowd favorite as it darted around the gymnasium shooting balls into basketball hoops. A new initiative, Cyber Seniors, is Team 195's most recent method of promoting STEM for all. The program starts on February 8 with our team members visiting a local assisted living facility twice a month to create Lego projects with residents and educate them about STEM. Many of these people were already CyberKnight fans who previously attended STEM for All, saw robot demos at the facility, or were introduced to the team through our work with Veterans. These residents have been diagnosed with cognitive deficiencies like Alzheimer's or Dementia. The customizable activities being conducted will accommodate different skill levels and needs that best benefit the capabilities of each senior. The ability to repetitively build with Lego bricks can help decrease the progression of their diseases because it exercises fine motor and memorization skills. These interactions link together two generations of people in our community and demonstrate our mission of STEM being available to all.

Team 195 is dedicated to supporting Veterans, an often overlooked group of people. We host an annual Veteran's Appreciation Dinner to recognize the sacrifices of these brave men and women. This year, 80 people attended the dinner. Prior to the event, we collect food donations from the community to promote the dinner while raising awareness of the needs of Veterans in Southington. The team also writes and sends an average of 250 thank you cards to service members throughout the year. Recently, we joined forces with Wreaths Across America to adorn approximately 300 Veteran gravestones and honor their memory. This is Team 195's first year working with the organization and our volunteerism will continue in May, when we will place flags on hundreds of Veteran graves for the summer.

Essay - page 2

Kickoff is a key point in our season as we gather at the Southington Municipal Center with students, mentors, family members, and alumni. We involve our community by inviting the superintendent, principal, media, and government officials. The immense support we receive from our community leaders inspired us to work to increase government support of FIRST in our state. Team 195 designed and funded a Connecticut FIRST display in the halls of the State Capitol. Our biennial display illustrates the importance of FIRST and the necessity of funding STEM programs and FIRST teams. The display is updated to keep legislators aware of FIRST programs and teams in towns across Connecticut. Our advocacy through the State Capitol is just one way we assist FRC teams in securing support. Recently, our design team began working with Emulate 3D by Rockwell Automation, a company focused on developing an augmented reality program primarily used for conveyor belt system design and visualization. Team 195's design team created a process to use Emulate3D for giving judges a new FIRST experience, where each judge can take an augmented reality tour of our robot. Since we are using this software in an unconventional way, we conducted multiple phone calls with the company to explain how we use the program and also created a social media presentation explaining our usage of the product. After hearing the amazing ways that the team employs their program, Emulate3D by Rockwell Automation was inspired by our creativity and offered free licensing to all FIRST teams.

For multiple years our team has supplied donations to help Guiding Light Orphans, an organization in Uganda that builds schools for orphaned girls. As orphans of AIDS victims, these young girls are already disadvantaged. The girls are deprived of education because only boys are permitted to attend high school. Guiding Light Orphans also assists kids with epilepsy in obtaining the medication necessary to diminish their symptoms enough so that they can return to school. This year, our Media & Marketing Team filmed and edited a video for the organization's website to support their marketing and raise awareness of their needs. The video serves as a visual representation of the positive impact this organization has on young men and women in Uganda.

Overall, Team 195 is an exemplary advocate for progressing the mission of FIRST. We have instituted new teams, supported several charities, provided education for others around the globe, aided competitors in all aspects of FRC, and gotten our government involved. We plan to extend all of these programs and create new ones to broaden STEM, until it is accessible for everyone around the world. Our actions truly display our number one belief; STEM is a right, not a privilege.