

Chairman's Award - Team 195

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2019 - 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 with special emphasis on the 2018/2019 year and the preceding two to five years

FIRST ensures that the CyberKnights learn problem solving and time management skills, but also the importance of working together through gracious professionalism. Many CyberKnights kick off their FIRST experience in FLL, ensuring a basis of experience as they transition to FRC. 85% of CyberKnights have gone on to pursue STEM over the past 5 years- all pursued higher education. In the spirit of gracious professionalism, our alumni give back to FIRST, mentoring Team 195 as well as 11 other teams.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2018/2019 year and the preceding two to five years

This fall 195 hosted our first STEM for All event. Over 300 people gathered together to experience the magic of STEM through various fun workshops. Miss Connecticut even came to give a speech about the importance of girls in STEM. Additionally, the CyberKnights reach out to our local and state governments. We worked closely with our state senators to develop our "FIRST in the Capitol" display. Also, we regularly perform demos at local organizations, like the Southington Education Foundation.

Team's innovative or creative method to spread the *FIRST* message

The CyberKnights always emphasize the true FIRST message - about spreading a passion for STEM to All. Our mantra of bringing Stem to All is unique as we reach out to those who otherwise would not get to experience FIRST. That's why we reach out to veterans, children on a military base in Turkey, and orphans in Uganda. The FIRST ethos can inspire anyone, and it's only by reaching everyone that FIRST's vision can truly permeate our global culture.

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

Team 195 aims to be an example of gracious professionalism by being a helping hand. Annually we share a practice field for any CT FRC team to use before competitions. In addition, we welcome other teams in our manufacturing space, share our scouting system, and mentor other teams across the globe in design, programming, and media production. We also have held 4 mentor socials over the last 5 years in order to bring CT mentors together, with up to 52 mentors in attendance.

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

195 helps start FRC teams in and beyond our home of CT. In 2017, we began mentoring rookie Team 6459 from Turkey, sharing our CAD and mentoring them over Skype. We also helped start Team 5842 from Florida in 2016. Our team has flown down to Florida to share mechanical mentoring. This season we started mentoring Team 7462, Disruptive Technologies, from Danbury, CT. Throughout all of build season, we have shared our build space with them, teaching design, manufacturing, and programming skills.

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

The CyberKnights value spreading STEM to all students, so we have continuously expanded our FLL programs over the past 6 years to include 5 different schools. Our goal is to share our love for STEM with each of our local elementary and middle schools. Once these teams start, we continue to mentor and cover any FLL expenses. We strive to make sure every student has access to STEM, so this year we also provided supplies and mentoring to start an FTC team on Ankara Military Base in Turkey.

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

Team 195 hosts FLL events, such as Ragged Mountain and our Southington FLL Exhibition. Our support helps students in FLL to progress to FRC when they reach high school. For three years Team 195 has volunteered at CT FIRST University Day, running conferences on Alumni Engagement, programming, community outreach, and mentoring. We also developed a new FIRST Team Support subteam to respond to questions on topics ranging from design to team administration regularly through our Facebook page.

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 mentors many younger FIRST teams. Every week, CyberKnights provides hands-on mentoring to our 5 FLL teams in our elementary and middle schools. In addition, we have mentored several rookie teams during their founding years, including the all girls team Team 5686, Team 5842 from Florida, and this year Team 7462 from Danbury, CT. Our team is starting and mentoring an FTC on Ankara Military Base in Turkey in order to bring FIRST to children who otherwise would not have access to it.

Describe your Corporate/University Sponsors

United Technologies is a very dedicated sponsor. UTC pays our entry fees and provides many mentors for our team. Mohawk Northeast has been a sponsor for 6 seasons, providing \$4000 annually and a 5000 ft² facility. They offer job positions to 195 alumni, allowing us to pursue our passion of STEM. UHart has generously donated \$1500 annually and provides tours of their labs. Frank Fragola has generously donated his Southington Transmission and Auto Repair building for use as a meeting space.

Describe the strength of your partnership with your sponsors with special emphasis on the 2018/2019 year and the preceding two to five years

Without our sponsors, 195 would still be located in our school's storage closet. That's why they are included as a part of our family as mentors and our biggest supporters. Not only do we provide our sponsors with social media visibility and plaques of thanks, but we invite them to celebrate beside us at our FIRST Friday and End of the Year Party. Our partnerships are incredibly strong, with several sponsors, including Mohawk Northeast and Ametek, hiring CyberKnights after they graduate.

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

FIRST is more than just an organization - it is a way of life. Through a competition based format, FIRST unites people from all backgrounds to achieve one mutual goal of bringing STEM to all. Like no other organization, it teaches students technical skills as well as how to work alongside others in any workforce. Because of FIRST, students all over the globe are inspired to become engineers and inspire the workforce of tomorrow.

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

This year 195 refocused our outreach towards 4 goals to accomplish our mission of bringing STEM to All- 1. Establish international initiatives that provide educational opportunities to children who otherwise wouldn't have them, 2. Strengthen our relationship with US government officials to spread STEM awareness, 3. Develop equal opportunities for people across the US to gain or pursue a passion for STEM, 4. Promote a supportive and cooperative culture among all FIRST teams and volunteers.

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

Kristen Gorham

Essay

Team 195 had humble beginnings. When our team was founded in 1998 in a high school storage closet, we would never have expected to grow into the transformative organization we are today. Our team has grown to include more than just students and mentors, it has grown into a family of sponsors, veterans, fellow FIRST teams, government officials, and children all working together towards one common goal: bring STEM to all. The CyberKnights believe STEM should not just be for a lucky few - we see STEM as a birthright. As we continue to grow, our mission is to include as many people from all walks of life as possible to truly achieve STEM for All.

When FIRST announced its 2019 "Launch" platform of games, we were enthused. These games are more than just great competitions - they all tie back to the our core mission: bringing STEM to All. In order to get into orbit, take a mission to the moon, or travel into deep space, everyone, regardless of their background, must understand and embrace technology. For more than 20 years, Team 195 has been seeking new ways to grow STEM education, make it accessible to all, and promote it throughout our school, community, and state.

In order to truly achieve STEM for All, we must ensure no single group is left out. When thinking of people who are often forgotten in our country, one group that stood out to us is our nation's veterans. This is why we developed our motto "Serving Those Who Serve First." One of the most abandoned groups of veterans is the Laotian Special Guerilla Unit, who served in the Vietnam War alongside Americans. Despite their service to our country, these veterans do not receive any military benefits. This inequality inspired us to partner with SGU for the past 3 years to develop a national monument in their honor in Middletown, CT. This fall we attended the ribbon cutting ceremony for this monument, where several state leaders congregated to finally commemorate the service of the SGU veterans. We also had the honor, once again, of laying a wreath at the Tomb of the Unknown Soldier this fall. Learning about these veterans' sacrifices and having the opportunity to thank them on such a national stage is tremendously humbling.

Too many veterans spend each holiday season away from their families so that we have the privilege of being with ours. We recognize this sacrifice, so each holiday season, we write over 250 cards to show our heart found appreciation to those veterans. However, we take this expression of gratitude a step further. We know that not everyone can afford the privilege of having a hot holiday meal, so we partnered with the Southington Elks Club for the past 6 years to run our Veterans Appreciation Dinner. Every January, the CyberKnights walk into the Elks Club, decorate, and prepare for a night of serving ahead of us. Crowds of veterans flock the Elks Club to join us for our annual dinner. As they enter the building, we pin them with American flags and graciously thank them for their service. The rest of the night is full of food and speeches from state leaders and CyberKnights expressing gratitude.

Teaching the youth of today about STEM and growing FIRST is essential to our team's mission. Each season, the CyberKnights raise money to start and give annual funds to each of our FLL teams in Southington. We proudly walk into 5 schools to donate time and educate the youngest members of the FIRST community. In order to prepare our students for their competitions, we started a Southington FLL Exhibition Event at one of our local schools.

Just this past fall, we eagerly hosted our first Family STEM for All Day. Over 300 people from all walks of life came eager to learn about FIRST and STEM! We set up several activities to inform everyone about each and every impactful aspect of FIRST Robotics and STEM education. With liquid nitrogen and robot building booths we inspired children with the wonder of science while we also emphasizing FIRST's mantra of coopertition through team-building exercises and incorporating our focus on serving the underserved by raising money to build a school for Ugandan orphans. We even partnered with Miss Connecticut at this event! She gave a speech about the importance of including all, especially young girls, in science and technology.

Team 195's focus is providing STEM opportunities to those who otherwise would not have them. Truly achieving STEM for All means our impact must reach children across the globe. That's why this year Team 195 founded a new initiative called "STEM for Bases." To kickoff this initiative, 195 started and donated FTC supplies to a school on Ankara Military Base in Turkey for children of military and US embassy personnel. Our team paid for their practice field and robot supplies as well as provides regular guidance. This year we also began collecting donations for tools and supplies for Guiding Light Orphans to build a school for orphan girls in Uganda. Not only are these young girls disadvantaged because they are orphans of AIDS victims, but they are also deprived of educations as only Ugandan boys attend high school. Through supporting the development of this school, the CyberKnights aspire to provide access to education that these young girls would otherwise never have.

FIRST is special because it brings people together from diverse backgrounds. Following FIRST's lead, the CyberKnights strive to bring all FIRST teams together because STEM for All cannot be achieved alone. We empower our fellow teams by building and sharing a practice field with them since 2013. We also have taken a major role in NE FIRST University Day. This past year, we led several conferences including a mentor Q&A panel, an alumni engagement talk, and an 8 hour session on motion control.

Team 195 also includes teams outside just New England in our outreach. This year, we took the initiative to mentor team 7462 and prepare them for each of their events this season. We have worked alongside Team 5842 from Florida and have flown down to mentor them as they prepare for kickoff; however, our impact doesn't stop in Florida. Recently, we started supporting Team 6459 from Turkey. We met them in person at the 2017 Tech Valley Regional event. We didn't lose our bond after Tech Valley. We help them in different ways, whether it be over Skype, providing batteries or developing a robot design tutorial to jumpstart their team in their pursuit of STEM education.

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In these trying times, Team 195 knows the budgets for STEM are on the chopping block, so we take our relationship with government very seriously. Working alongside each other is essential, but walking through the halls of the legislature, you understand that including lawmakers in the growth of STEM is just as important as anyone else. STEM cannot be brought to all without support of our government, so we take it upon ourselves to inform our state government about FIRST. In doing this, the CyberKnights founded our "FIRST in the Capitol" initiative. We included many CT FRC teams in a large informational display, filled with pictures that show legislators the crucial role that FIRST and STEM play in inspiring Connecticut's youth and empowering our state. Every year since 2016, this display has filled the halls of the CT State Senate.

Over our history, we have built a bond with our town. Our whole town is involved in our mission of spreading STEM. We are invited to give formal presentations to not only our Board of Education, but also our Town Council. Through these presentations we emphasize the value of STEM in impacting our community and the world beyond us to our town's leaders. Each year we are able to spread our message to thousands of people as we run a float in our town's Apple Harvest Parade. As we walk through the streets of Southington, we are inspired by the smiles our frisbee-throwing, tote-stacking, basketball shooting robots bring to everyone's faces - from the littlest of kids to even adults. In recognition of our team's efforts to spread STEM, we were honored with the parade's "Best Youth Group" Award each year from 2013 until 2017. One of our most cherished community accomplishments occurred when our school made robotics a varsity sport. By getting this recognition, we are able to show students that a passion for STEM is just as valuable as a passion for sports.

The support of our diverse sponsor base - from small mom and pop pizza shops to international companies - is essential to our mission of STEM for All. They guide us and provide us with materials that we are forever grateful for. Mohawk Northeast is one example of a sponsor that goes above and beyond - they provide us with an open space big enough for a practice field! We have built such a bond with Mohawk that they have hired CyberKnights because they know we have developed a strong work ethic and passion for STEM through Team 195. We are forever grateful for each sponsorship and know that without their support our impact on STEM will not be sustainable. That's why we strive to show our sponsors how much they mean to us. Each year we give our sponsors a yearbook of our season, give out plaques of appreciation, and thank our sponsors on all our team social media and marketing - including our Apple Harvest float! We also include our sponsors as a part of our 195 family - inviting them to all of our events, hosting a kickoff with them, and welcoming them at our FIRST Fridays, where all our teams students, mentors, and sponsors can get together and bond. For the CyberKnights, "STEM for All" is not just a saying - its a way of approaching everything we do. The CyberKnights dream of a world where STEM is a birthright. By starting locally and expanding globally, we do everything to make this dream a reality. By working alongside our mentors, sponsors, veterans, community, other FRC teams, and children across the globe, we have taken meaningful steps on our moonshot to ensure everyone has equal access to STEM.