

FIRST Impact Award - Team 195

2025 - Team 195
Team Number
195
Team Nickname
CyberKnights
Team Location
Southington, CT - USA
Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in <i>FIRST</i> programs.
The FIRST program instilled a work ethic unmatched by any other program offered in school. In the past 3 years, we saw 100% of students graduate from high school and pursue an undergraduate degree or trade. In the last 3 years, 100% of 195 graduates have pursued a STEAM degree. 39% of 195 teaching mentors are FRC alumni. We have seen alumni become the next generation of engineers, programmers, and business professionals. Many have been employed by Disney, Lockheed Martin, and RTX.
Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.
Southington's 43,700 residents, with 20.3% seniors, is higher than the statewide 16.3%. For 7 years, we have held ElderKnights sessions, building LEGOs with seniors at risk of memory-related diseases. In 2024, we held 10 sessions at 2 senior centers. Southington's tight community values the Apple Harvest Festival to celebrate autumn. We participate in the famous parade showcasing community pride. Southington's Veteran community has provided opportunities to serve those who have served us first.
Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> Mission in ways that are effective, scalable, sustainable, and creative.
Value-oriented, community-based, STEAM-focused, and continuous expansion are the key factors contributing to Team 195's success in spreading the FIRST mission. For example, we led 6 paragon initiatives including Girl Scout Camp, Girls Who Code, Waterworks, Farmers Market, FLL teams, and the local parade. Southington's 15.3% youth population were engaged in our 7th STEM For All event, featuring 23 STEAM activities led by Team 195 students, drawing over 300 attendees annually.
Describe your team's goals and the progress you have made towards them to fulfill <i>FIRST's</i> Vision.
We aim to inspire students to pursue STEAM education and careers. Similar to FIRST, our team celebrates STEAM and promotes future leaders in science and technology. We achieve this through hard and soft skills training. Our team impacts over 1000 students annually. We elevate STEAM through Girls

Who Code, FLL, STEM For All, Waterworks, and Manufacturing Day at the State Capitol and Girl Scout Camps. We are committed to shaping tomorrow's leaders, by fostering a teamwide passion for STEAM.
What impact has your team seen from your efforts described in the above question? How does your team measure impact?
We measure impact by tracking the number of individuals served and community-building hours. Our social media presence generated 351,000 views, 9,500 hours, and 2.2M impressions. Community engagement has driven a greater demand for STEAM programs, resulting in double the student participation and expanded access to STEAM experiences. 100% of our 2024 graduates are pursuing STEAM-based fields. 195 students served our community for over 3,000 hours.
Please provide specific examples of how your team and team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years. How do you share these best practices with other teams?
Team 195 models behavior for other teams. We persevere in times of adversity, such as a 9-day rebuild of our underperforming robot, sharing our practice field with 49% of CT FRC teams, publishing our scouting data, assisting 25 global teams through our Knightline program, and fostering and mentoring 21 FLL and 3 FTC teams. At FIRST Events, we have broken down 7+ fields in the last 3 years and presented programming, Team Sponsorship recruitment, and ROS 2 at the 2024 World Championship.
Describe your team's initiatives to Assist, Mentor, and/or Start other <i>FIRST</i> teams with emphasis on activities within the past 3 years.
In 2023, we drove a 200% increase in FLL efforts from 2022. Even after facing staff budget cuts, we sustained mentoring all 21 FLL teams (12 Challenge, 8 Explore, 1 Discover). 93% of CyberKnights mentor at least 1 team. Our team has assisted at an FTC Qualifier and hosted an FLL Qualifier event twice. We started and mentor 3 FTC Teams including The CyberBolts who have two FTC event wins. We sustained this through strong student-led mentorship and assisting other FRC teams.
What other initiatives have you created, grown, sustained, or participated in (<i>FIRST</i> or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?
We have inspired 10,000+ youth through Girls Who Code, Middle School robot demos, Shake-A-Can events, Manufacturing Day at the State Capitol, and the Apple Harvest Festival, where 325+ kids drove our robot. We showcase our robots at fundraisers and sponsor visits and engage students at pep rallies to promote STEAM. Our Farmer's Market efforts have driven FLL school adoption, fostering growth in FLL and Team 195 participants. As a result of sponsor demos, we have created an FLL pipeline.
Describe the partnerships and relationships that you've created with other organizations (teams, sponsors, educational institutions, government, philanthropic entities, etc.) and what you have accomplished together, with emphasis on the past 3 years.
Our team partners with 100+ local and global organizations. We mentor 8 FLL teams with OTIS sponsorship and host a dinner for 180+ veterans with the Elk's Club. Through CT Veteran Hospital, we distribute 400+ holiday cards to seniors and veterans. The ElderKnights LEGO program at Mulberry Gardens and The Orchards engages 120+ seniors. We also collaborate with 23 FRC teams, 60 sponsors, local businesses, municipalities and library, schools, state government, and Guiding Light Orphans in Uganda.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, <i>FIRST</i>, and your communities.	
In the past 3 years, our team has championed equity, diversity, and inclusion through impactful initiatives. In 2023, we partnered with Girls Who Code, to empower future female STEAM leaders with coding skills. We attended the town pride festival featuring a robot demo with rainbow FRC bumpers. We are a model of diversity, with 21% POC members—surpassing the town's 12% POC population—and 40% girls. Our team actively promotes inclusivity by fostering an environment where all voices are valued.	
Explain how you ensure your team and the initiatives you have created will be sustainable.	
Our team ensures sustainability with mentorship, leadership, and partnerships. Our publicly accessible Predicament Playbook guides team operations. The FIRST Friends program pairs freshmen with upperclassmen, while student leads train underclassmen for leadership roles. All underclassmen join FTC to gain FRC skills. We preserve their legacy via social media and engage partners with demos, tours, and awards, fostering sustainability. Thus, 95% of students and 100% of our largest sponsors return.	
Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.	
One area of improvement is government advocacy. Our team has made progress in the past 2 years by expanding relationships with the Board of Education and town officials. We crafted a grant with the Superintendent and were awarded for FLL use. Engagement increased with State Representatives through statewide events that advocate STEAM initiatives. We also proposed legislation to 9 CT lawmakers to promote STEAM in schools, ensuring lasting educational impact.	
Briefly describe other matters of interest to the <i>FIRST</i> Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique, particularly noteworthy, or had a large impact.	
We focus on leadership and inclusivity to foster a supportive and high-performing team culture. Our team acknowledges supporters by giving back. For example, through a plaque celebrating the new town library, public practice field, and Everybody Drives Knight, we positively impact contributors. Our team completed 17 hours of communication, feedback, and emotional intelligence training. Students gain critical problem-solving and leadership skills while building trust and collaboration.	
Judge Feedback	
	The CyberKnights strive to make STEAM education accessible to all. What do you think the steps would be to bring FIRST to every school, starting in the USA? An area the team has an opportunity to improve. Something that really impressed the judges.
Essay	
The CyberKnights are more than a robotics team - we are a force for change. We realize that real change doesn't happen overnight. We constructed a three-year plan to drive six key areas of focus: Team	

Organization, Student Development, FIRST Development, STEAM Outreach, Government, and Community. We enact change in our communities through relentless outreach that impacts those of all ages. With over 20,000 student hours and 3,000 outreach hours each year, The CyberKnights are making FIRST's vision a reality: creating a world where science and technology are celebrated, and where young people dream of becoming science and technology leaders.

Team Organization & Student Development Our team consists of 43 students working across 7 subteams: business, design, electrical, mechanical, programming, project management and strategy. These subteams are led by 11 student leads under the guidance of 21 teaching mentors.

These mentors have various professional backgrounds in STEAM-related fields. We have 5 support mentors who coordinate behind-the-scenes activities to support our team. 8 mentors come from sponsor companies such as Lockheed Martin, OTIS, and Disney.

For the second year in a row, our team collaborated to outline our strategy and create a poster that we display in our shop, featuring personal and team-wide student and mentor commitments. 17 students in leadership positions participated in 16 leadership classes. 5 students participated in a weekend-long presentation class. After weekly meetings, all CyberKnights participate in team-building activities led by our student leads. Each year, our students participated in over 30 hours of team and student development sessions facilitated by Paul Coppola, Ph.D. Students participated in technical skill-based classes. 10 students learned to program using Python and C++ during off-season classes (240 total student hours). 5 students participated in 10 CAD classes. In 2024, we awarded 22 School Varsity letters to students who exemplified FIRST behaviors and volunteered on behalf of the team for 60 hours or more.

FIRST Expansion The CyberKnights mentor 21 FLL and 3 FTC teams. This represents a 200% increase in FLL efforts since 2023 of which all teams have been sustained. 93% of CyberKnights mentor at least one FLL team. Over 210 students participate in a CyberKnight-run FLL program. In addition to our 13 hometown teams, we have also expanded our FLL reach into a neighboring city. In November 2023 and 2024, we hosted and ran the Southington FLL Challenge qualifier event. In 2024, there were 21 FLL teams in attendance. At this event, 20 CyberKnight student volunteers took on a wide variety of roles.

Our team requires all 22 underclassmen to participate in FTC, and they are mentored by 10 upperclassmen. In 2023, The CyberKnights started two FTC teams: Team 23366: The CyberSquires and Team 23367: The CyberBolts. In 2024 we added a third FTC team: Team 26050 The CyberSurge. This program helps younger students get more involved in STEAM programs and build skills for their futures.

In February 2023, we hosted and supported the CT Southington FTC qualifier at one of our local middle schools which was attended by 24 FTC teams. In November of 2023 and 2024 we ran an FTC scrimmage attended by 6 FTC teams. This drew students and parents from FLL to experience the next level of FIRST.

Each year, we build a full-scale practice field in our sponsor-donated facility. We open this facility for teams to use our practice field or machine shop. Last year alone, we hosted 23 local FRC teams. Over the last 3 years, 49% of CT FRC teams have used our practice field.

Team 195 provides seminars to share our knowledge with the FIRST community. At the 2024 FRC World

Championship we presented 3 seminars reaching 600 people: "Mastering Sponsorships", "Scouting- More Than Just Alliance Selection", and "Taking FRC Robots to the next level with ROS". These, along with an additional seminar were also presented at the 2023 and 2024 FIRST University Day where we reached over 200 people. These presentations are publicly available on our website.

After receiving many strategy and technical questions at competitions, we wanted to extend the opportunity for collaboration. This sparked the idea for "KnightLine" in 2023 to answer questions on coding, CAD, business, outreach, build, FLL, and FTC. This live chat experience is still widely used today with over 25 inquiries, and has assisted teams as far as Israel.

STEAM Programs Annually, The CyberKnights host "STEM For All," a local event featuring 23 STEAM-related activities, hands-on experiments, and demonstrations run entirely by CyberKnights. STEM For All is one of our most well-known community events, free to the public, and is available to all ages. Over the last three years, we have brought in over 900 attendees.

According to the Global Gender Gap Report (2023), women make up 29.2% of the STEM workforce. To combat this we introduced the Girls Who Code program in 2024. This launched as a way to spread STEAM to girls ages 8-18. We have run this program 3 times, for a total of 36 hours. More than 25 girls have participated since the program's inception. In 2024, we also designed and delivered a Girl Scouts summer camp program where over 39 girls earned 3 STEAM related badges. This program will be continued each summer.

In partnership with the Town of Southington, the CyberKnights developed "WaterWorks". For the past 3 years, WaterWorks educated kids ages 8-12 on Uganda's water crisis and created STEAM based solutions. This 6-week program educated over 40 children. Registration fees, plus t-shirt sales, resulted in a donation of \$920 which provided a handwashing and personal hygiene station to the people of Uganda.

The National Library of Medicine states, "LEGO therapy provides opportunities to practice and improve [Executive Function], such as attention, working memory, and self-regulation". As a result, 7 years ago we created and continue to run the ElderKnights LEGO program. In 2024 We ran 10 sessions in 2 local assisted living facilities.

Community Engagement Strong engagement with our broader community at local events is key for Team 195. In 2023-2024, The CyberKnights totaled 3,000 hours in community volunteering (52% FIRST outreach and 48% community volunteering). These hours come from many community events, the largest being Southington High School's Homecoming Weekend and Southington Apple Harvest Festival where we interact with over 105,000 people. We have attended the annual Veteran's Day ceremony for the 8th consecutive year to honor those who served our country.

Government Engagement The CyberKnights present our Impact presentation with a robot demonstration each year to the Southington Board of Education to show the importance of STEAM education and what it can do for a community. At least one CyberKnight sat on the Board of Education for the last four years. Two student leads also sit on the engagement board led by the Superintendent to promote community engagement. Our advocacy for STEAM funding has led us to partner with our Superintendent of schools to obtain a grant that has benefited FLL programs.

In May of 2023 and 2024, The CyberKnights attended the CT State Manufacturing Fair where we reached over 1,000 attendees and potential employers each year with our robot demonstration and display of impact. Here, The CyberKnights reached 151 Connecticut House of Representatives members and discussed the program with 21 Representatives in 2024. In 2023, The CyberKnights were presented with a citation from Representative Chris Poulos. In 2023 and 2024, The CyberKnights received the Connecticut Interscholastic Athletic Conference (CIAC) Team of the Year Award for outstanding team performance.

At the State and National level, we have proposed a piece of legislation that would create a grant to provide FLL materials to schools in order to further the incorporation of STEAM curriculum. This document was proposed to Douglass McCrory, Patricia Miller, Robert Sanchez, Gary Turco, Joan Hartley, Geraldo Reyes, Gale Mastrofrancesco, Donna Veach, and Chris Poulos.

Sustainability Each student is provided with a sponsorship package that allows them to contact local businesses and organizations to provide team funds and support our outreach initiatives. For the 2025 season, the CyberKnights raised \$28,000 (at date of submission) from 29 sponsors. After the start of our season, we send emails to assist other team's sponsor efforts. These emails include team progress and tips so other teams can implement similar sponsor programs.

Students are broken up into groups of 9-10, where they compete with one another to raise the most funds through sponsorships. Students are taught and motivated to obtain sponsorships as part of the donation goes towards their travel credits. Once a student graduates, we transition their sponsorships to current members to ensure retention. We host demonstrations at our sponsors' businesses and invite them to our competitions and shop. For our largest sponsor, Mohawk Northeast, who donates our space for building and practice, we host an annual lunch and demonstration for all employees and their families.

In Closing The CyberKnights' impact goes far beyond building robots. It's about building people, connections, and opportunities. While we have instilled sustainable, lasting, and quantifiable impact, our job is far from done. We will continue to reach more people, expand to more programs, and stand apart from other teams in the way we drive impact through our six key areas of focus and long term strategy. At our core, we believe that everyone deserves to feel included and inspired. By sharing our passion for science and technology, we're not just shaping future engineers - we're creating a future filled with innovators, problem solvers, and leaders ready to make a difference.;

