



The Highlanders FRC Team #4499 Executive Summaries

Describe the impact of the FIRST program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in FIRST programs as mentors/sponsors

The graduation rate of our students who pursue STEM (College, Armed Forces, Trade Schools) is 88% and 86% since inception. Many students receive achievements like the Grewcock, Daniel's Fund, and Boettcher Scholarships. 13 students have participated in internships with companies like Lockheed Martin, Scion Aviation, and Neaera Consulting in technologies like satellite guidance systems, aviation and connected and automated vehicle industries.(444)

Describe your community along with how your team addresses its unique opportunities and circumstances.

Based in Fort Collins CO, 4499 is a community team made up of 25 students from 6 schools, 6 cities, and 2 countries. Meetings start with homework, then we spend our time in the shop. We review our tasks for the day during our team dinners made by our families. Our team is more than just a team, we are a family. Our unique program focuses on team-led ideas and decisions that promote workforce development skills like leadership, critical thinking, and communication to prepare us for our future. (497)

Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?

4499 advances FIRST's mission through programs like our robot camps, science kits, and continued translation of our book series into 5 languages. We spread the message of FIRST through the new programs including a first-ever Colorado FIRST license plate initiative and new camps in Ecuador. We continue to scale up our efforts by working with CSU to create summer camps and host on-site welding classes, impacting 190 students. We measure success through the lives we have impacted. (485)

Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.

4499 aids teams with our new safety, team management and sustainability classrooms. These have been used by Colorado FIRST and shared with other teams. Students advocate for FIRST Statewide as co-chairpersons in the Colorado FIRST Student Advocacy group and in FIRST events serving as advisors, referees, demonstrators, and reviewers. We hosted a successful 2-day workshop, how to swerve, and led 7 teams through classes to build fully functional swerve bots. This resulted in 5 new swerve teams. (496)

Describe your team's initiatives to Assist, Mentor, and/or Start other FIRST teams with emphasis on activities within the past 3 years.

Our Drop-In Shop days, workshops, donation of materials, and mentorship have assisted 26 FRC and FTC teams. Through our weekly meetups and Shop-Talks, 456 members collaborate, exchanging ideas and insights. Our FRC curriculum, emphasizing kitbot assembly and programming, was shared with the 4 rookie teams in Colorado. Overall, assisting 18 FRC teams, and 8 FTC teams (4 rookie teams), starting 1 FTC team and working on starting 1 FLL team in Ecuador and India. This showcases our wide-reaching impact. (496)

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

To increase the impact of our FRC program, we encourage students in 7th grade or older to join our team. We host FLL events, run workshops and mentor teams. Most of our graduates have gone into engineering fields (88%), and many have been awarded internships at engineering firms. 100% of our seniors this year pursued STEM education/careers. Assisting in starting camps/workshops across 5 countries, 4499 has impacted 132 children and donated 110 STEM kits and 33 rover kits internationally. (492)

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years.

2024

Establishing Neaera Robotics 501(c)(3) in 2013 to support 4499 and to promote the vision of "HANDS ON TRAINING, MENTORING, AND EDUCATION IN THE FIELDS of STEM" we have been able to help and assist 92 students and 291 since 2013. Sponsors donate parts, financial support, and offer our students internships. 13 of our students were able to receive internships, this year we have another internship available for two students. Our partnership with our sponsors are invaluable to our future! (492)

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, FIRST, and your communities.

2024

4499, a student-led team, is open to all students of any experience and is **free** to everyone. Our diversity plan prioritizes inclusivity and fostering a safe space where all voices are valued embracing our differences. Through virtual meetings, webinars, and collaboration, we include all of our students. This year, we have diversified our team by having a 56% minority representation. All our mentors are YPP certified, as well as all mentors and students have participated in FIRST's ED&I training. (499)

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future.

2024

Our team management initiative and sustainability course teaches each team member about team leadership, expectations, outreach initiatives, fundraising goals, and team recruitment. Our Cycle of Success initiative, where alumni work for our sponsor, Neaera, and a portion of the profits and mentor support go back to the team. This has brought 60% of alumni back to mentor and \$225K in the past 3 years and \$900K in the past 12 years, to financially support our program. (471)

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years.

2024

In the past 3 years, 4499 has secured support from 9 sponsors, showcasing gratitude on social media and through logo displays. To sustain our connections with our sponsors, we write annual reports showing the impact their support has made. We encourage on-site visits and special events with government officials to highlight our skills. We collaborated with WYDOT and the Wyoming Governor's office to share our workforce skills, aiming to support the launch of their own STEM programs. (486)

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

2024

4499 is a community-based team, we do not have a pipeline of students from a school to depend on. We expanded our program to involve younger students which was such a successful way to onboard, train, and set team expectations quickly. Our Team Management Initiative helped us to create a safe space to collect and track information like food restrictions, the team contact, and shop certifications. Our program welcomed 9 students this year, increasing our team to 25 students. (487)

Describe your team's goals to fulfill the mission of FIRST and the progress you have made towards those goals.

2024

Team 4499 proactively engages with the community, whether it's local or global to transformatively spread the FIRST mission. We impact students' lives by teaching them the possibilities of STEM regardless of where they are from and what their background is. We have gone to 5 countries from which

we were able to impact hundreds of students through STEM camps. We solidified plans for running 6 camps in India, and new summer camps locally, and are in talks with a local school to start a FIRST team. (500)

Briefly describe other matters of interest to the FIRST 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 or particularly noteworthy.

2024

4499's eagerness to learn and improve our skills shines through everything we make. Students and mentors partnered up to design and machine our own CNC Router. This project took us 2 years to complete but taught us exceptional skills further deepening each team member's strengths. By providing a hands-on learning experience our students have a unique confidence and understanding that anything is possible and we can create anything we put our mind to. (486)

(OPTIONAL) Please use this space to ask 1 question to your FIRST Impact Award Judges which will be answered after each event with feedback from the judges (250 characters maximum). Note: Questions asking what is required to win the award will not be answered.

2024

How would you evaluate teams that have large opportunities for change through mentor connections in a school district and compare that with student efforts in a smaller community with workforce development skills and hands-on learning opportunities?