

Chairman's Award - Team 525

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2022 - Team 525

Team Number

525

Team Nickname

Swarddogs

Team Location

Cedar Falls, Iowa - USA

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 impact of FIRST stays with our students. Our alumni stay in contact, come back to visit, and 20+ volunteer at the Iowa Regional yearly. 3 of our current mentors are alumni of Team 525. We provide hands-on work, allowing students to pursue their passions in STEM, setting them up for success. 100% of team members in the past 3 years have pursued STEM careers with alumni working at Apple, NASA, and more. With a 100% graduation rate, students go into college with the skills they need to succeed.

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

We've supported the growing interest in FIRST by expanding our school district to have all 4 FIRST programs for 10 years. Our local celebration, Sturgis Falls, is the perfect opportunity to connect with our community and showcase all levels of FIRST. With the help from our local university, The University of Northern Iowa who hosts the Iowa Regional, we can show our families and community what FIRST is about. UNI offers scholarships at the Iowa Regional to enhance students' futures.

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?

The Cedar Valley STEM Festival provides the opportunity to bring all 4 FIRST programs together at one event and attracts parents, kids, educators, and business people. Swarddogs showcase our robot at multiple Back to School Nights every year, inspiring students to join a FIRST team. Our extensive outreach led to increased interest in all programs, resulting in over 40 teams in our district. We excite our community about FIRST by making it intriguing and accessible for everyone.

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

We host 3 key annual events: a kickoff, scrimmage, and a regional. At these events we model the importance of volunteerism, with over 60% having Swarddog ties. At our kickoff, we lead 8 workshops including awards, mechanics, rules and strategy. At our scrimmage, we provide trained inspectors to go through the inspection process, with the purpose of identifying problems before their events. We take pride in setting the example - a big part of who we are as Team 525.

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

Our passion for growing FRC took us 3 tries to get critical funding to increase the teams in Iowa - an expectation before FIRST would consider adding a regional. We continue to find additional funding every year to support new teams and mentors, enabling us to teach multiple mentor classes for college credit and allow the program to grow statewide. We lead weekly discussions with Iowa and Nebraska teams, covering critical aspects of starting and sustaining teams.

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?

As one of the only school districts in Iowa with all 4 FIRST programs, we provide opportunities from 1st grade to graduation. We keep students engaged at FLL and FTC events to not only show our robot, but inspire them to continue in FIRST programs. Our team has organized, hosted, run and supplied volunteers for 13+ years of the Cedar Falls FLL Regional Qualifier. We invest in the lives of younger students by assisting at FLL and FTC meetings so they can be their very best.

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

Our sponsor, John Deere, holds an engineering week where we share our love of robotics. Students serve as ambassadors at World Championships for John Deere Executives. The University of Northern Iowa works closely with our team to plan and host the Iowa Regional. We attend the UNI Business and Community Fair to introduce the university community to our team. Our work with community foundations provides financial support for the Iowa Regional and many local FIRST teams.

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

We are excited to have 1 of only 14 students selected in the U.S and Canada for the FIRST Diversity, Equity, and Inclusion Youth Advisory Council. That leader proposed the Communication Project which she is now helping implement and is 1 of 3 active students in that sub group. Students lead discussions on the LGBTQ+ community for all team members to feel safe and accepted on our team. We support school groups such as the Black Student Union and have active members in the Gay Straight Alliance.

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

Our "family groups" are led by student leaders who use their knowledge to ensure everyone is engaged and feels welcome. Mentors teach with the mindset of students doing the work. Team members learn, practice, and master the necessary skills to succeed and step into leading roles in the future. Students grow and become strong leaders for the next generation of Swartdogs - sustaining a 24-year long history and forming a strong future.

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

We arrange for FIRST teams in our community to join us at John Deere's Engineering Week, providing an opportunity for students to share with employees what they've accomplished by sponsoring so many teams. We send thank you letters to every supporter of our team and showcase our robot within our school district. In addition, we invite our local sponsors to events such as the Iowa Regional, the pre-season scrimmage we host, and our open house.

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

Our biggest challenge is student engagement coming out of Covid. With 75% of students having never experienced a full build and competition season, it is difficult for new members to find what they enjoy within the team. To improve this, we utilize small groups for trainings and discussions led by 6 students to allow every voice to be heard. Student leaders support their family groups to ensure everyone gets engaged, finds what they enjoy, and are on a path to becoming future team leaders.

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

Our goal is to grow and sustain FIRST in Iowa. In addition to teams we mentor, we host and run FLL Expos & Qualifiers, FTC League Meets & Tournaments, and the Iowa Regional to create easily accessible events. The life changing experiences we've had is what guides our goal to ensure the next generation has these opportunities to shape their futures. Current members of our team gain public speaking and leadership skills that will follow them in any future endeavors.

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.

The Swartdogs are named after Kenton Swartley, our founder and lead mentor since 1999. As 1 of only 2 teams in the world with 6 Woodie Flowers Finalist Awards it is evident that mentors lead, inspire, and empower our students. Our unique relationship with Iowa Governor Kim Reynolds drives her to be a strong supporter of STEM and FIRST statewide.

Likewise, a conversation with our students spawned John Deere Inspire, eventually leading to them becoming a FIRST strategic partner.

Essay

We're in it for the outcome of making FRC accessible to everyone in Iowa, not for the recognition. Our qualities of family, respect, humility, inclusivity, Gracious Professionalism, authenticity, and self awareness shine through in everything we do. All of these things are the 525 way of life and make us who we are. These foundational blocks serve to change our students' lives, in turn bettering our community and allowing us to be an instrumental part of making the FIRST vision flourish.

Bettering Ourselves

When our team was used as the FRC example of Gracious Professionalism by Woodie Flowers himself, we were very humbled. However, being recognized is not why we embrace Gracious Professionalism in everything we do. We value the importance of giving everyone the opportunities to compete while finding success. In each of our students, we instill the importance of being "More than Robots." Comradery over competitiveness is what makes FIRST stand out from sports in today's society, and it's a trait we apply in every aspect of our team. To us, Gracious Professionalism isn't just a phrase; it's the 525 way of life, making everyone feel included and respected.

Within the walls of our doghouse is a home. Our team is built of 40+ students and 11 mentors from varying backgrounds and lifestyles, but whoever walks in the door to our home is welcome. 100% of our team completes the Diversity, Equity, and Inclusion training provided by FIRST to set the expectations for our students. No matter our differences, we are all Swartdogs.

We are student driven in everything we do. Mentors are there to teach and assist students. Experienced students lead 10 subgroups and pass down knowledge and skills to new students within the team. Mentors share their experience so students gain the expertise to take them into their futures.

Being a part of Team 525 comes with gaining life and technical skills. Our 30+ outreach opportunities yearly enhance teamwork, public speaking, leadership, and self-directed learning. Our CAD, mechanical, and other workshops are examples of how our students learn in a low stress environment. All of these opportunities allow students to explore their interests and apply them to guide our team and ultimately shape their own future careers. Our 200+ alumni work for some amazing companies such as Apple, John Deere, Google, NASA, and Amazon, and have careers including fighter pilot, medical doctor, sports broadcaster, and musician.

Bettering Our Community

The impact the FIRST program has had on our lives is unforgettable and something we believe others should have access to. We continually work to remove the barriers to make this possible. For 5 years we provided new Iowa FRC teams with tools, knowledge and college graduate level credit to lower the barrier of entry. We did this by applying for and receiving over \$126,000 of funding that was dispersed to teams across the state over 3 years - taking a critical step towards our goal of making FRC accessible in Iowa. Growing to our max of 28 teams in 2019, we estimate that we have enabled over 400 additional students to experience an FRC team and have these life changing opportunities through the growth of FRC in Iowa. As an example of helping other teams find success, we organized a way to share a charter bus after an Iowa rookie team qualified for the World Championships that struggled to find transportation.

A key part of maintaining accessibility and FIRST interest is the Iowa Regional. The excitement of a regional competition is unforgettable, and running one in our state offers that experience for teams in Iowa. We invest in the future of our community. Starting in 2018, we invited 100 fourth grade students from our school district to the Iowa Regional. After seeing their excitement, we had planned to expand to 6 surrounding school districts, more than 500 students, in 2020 to increase our impact. Plans are underway to implement this for 2022. By visiting the Iowa Regional, they see future opportunities in FIRST which plants the seed early to continue exploring future learning in STEM.

Knowing the benefits of FRC, we prioritize sharing our experiences with peers. At our high school, we showcase FRC at 9th grade orientations, back to school nights, and assemblies. At back to school nights, we speak one on one with peers where they learn how FIRST has shaped our lives and the impact it can have on theirs. With our robot and student representatives, we reach hundreds of high school students at these events to show the impact FRC has had on us and the opportunities in STEM.

We love to inspire and teach young girls. The Expanding Your Horizons event gives our team the opportunity to show the next generation of females the excitement of STEM. Using our robot, female Swartdogs have taught over 60 young girls how to code over the course of 3 years. Tangible effects are what make an impact. Seeing the way their code moves the robot gives them the confidence to try programming.

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Our superintendent recognized the interest in STEM that our team has created in our school district with the increased demand for computer science curriculum. He responded by adding 3 different classes over the last 5 years, the newest one in Fall 2021. After seeing the impact FIRST has on high school students, he looks forward to volunteering at the Iowa Regional each year.

As our network with community leaders grows, so does our impact. At the Iowa State Fair, we organize 5 other FIRST teams to join us each year with over 40 students personally sharing experiences to hundreds of people for 10 years. Our visits to the state capital spreads FIRST on a larger scale to lawmakers and state politicians. Our passion and achievements in STEM is what stands out to Iowa Governor Kim Reynolds, who makes it a priority to stop by to see our team at the state fair as well as the Iowa Regional. FRC Team 525 embraces our opportunity to spread the FIRST values through everything we do. From community fundraisers to state-wide events, we make STEM fun and accessible for everyone.

Sustaining FIRST in Iowa

The excitement of a new game and the possibilities ahead are what make kickoff one of the most exciting parts of the season. We've run the only FRC kickoff in Iowa since 2016, allowing us to not only build stronger relationships with other teams, but work together to develop ideas. After the new game is announced, we host 8 different workshops to ensure every team has the knowledge to have an amazing start to their season. Quick build, robot design, game rules and strategy, and more allow teams to start building their robots and collaborate through this process. To talk about concerns and excitement for the upcoming season, all the mentors get together to ensure every team has the resources they need. Since its inception, over 90% of teams make it a priority to attend our in-state kickoff event.

In a mostly rural state like Iowa, growing and sustaining new teams is essential for ensuring success. Running college credit mentor training classes ensures new mentors have the knowledge and confidence to lead and guide teams across the state. We offer continual assistance throughout the build season through video calls and emails to make sure teams are on the right track. The training and extra help is offered to the 25+ teams every year in Iowa to ensure sustainability of FRC and continued growth in our state.

The Corn Dog Classic, a pre-season scrimmage that we run, is an opportunity for as many as 15 teams across the state to test robots on a full field with practice inspections. This event allows teams to experience key aspects of a regional event and resolve issues with cooperation and help from their peers. This isn't a competitive event, but rather a way for teams to feel confident heading into regional events. We were able to secure the space for an extended period of time, giving our local teams more opportunities to come back and enhance their designs. We work to make Iowa teams stronger and become the best they can be. When teams grow, they also can help others, sustaining FRC and FIRST throughout the state.

We extend our support to all FTC teams in our district. We've organized CAD and programming sessions for 3 years to ensure 6 FTC teams have a strong and successful season. Additionally, to sustain their program, we ran 2 events and advised in planning 4 additional events. With training and events, we are growing the future STEM leaders in our FIRST community.

To showcase and bring excitement to younger students and to show them what FIRST holds in their future, we have run the Cedar Falls FLL Regional Qualifier for 13 years. In the past 3 years Team 525 has run 10 FLL Explore Expos with over 10 team members serving in key roles as ambassadors, lead queueurs, and announcers at each event. We love seeing the passion for what these teams have accomplished. Five of our team members are mentoring FLL Explore and Challenge teams. Joining us at our buildsite excites both students and their mentors, sustaining the next generation of FIRST in our community.

Team 525 is represented on the FIRST Equity, Diversity, and Inclusion Youth Advisory Council. A student on our team was accepted as one of 14 students in the U.S. and Canada where she models our team qualities for FIRST teams all over. She shares our team values and is actively putting her proposals into action.

We do so much more than just make FIRST accessible. Our decades of hard work for the single goal of spreading science and technology has cultivated a collaborative community in Iowa and everywhere we go. The success of others fuels our passion, which in turn ignites our motivation to be champions for the FIRST vision in Iowa and beyond.