

Chairman's Award - Team 3381

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2021 - Team 3381

Team Number

3381

Team Nickname

Droid Rage

Team Location

Valders, Wisconsin - 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.

Droid Rage 3381 is DEDICATED to creating a positive environment that fosters a love of learning and growing in the field of STEM, but also in creating leadership skills to create the next generation of innovators and leaders. In our most recent survey, 64.2% of our alumni are currently in college pursuing STEM careers or have already graduated with a STEM degree. In the survey, our alumni reported \$324,000 in college scholarships over the past 3 years due to their experience in FIRST.

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

The 2019 Workforce Profile of Manitowoc County (State of Wisconsin DWD), states ""Over the past year, the county's average annual wage declined by 1.8%." This is a result of manufacturers, such as Manitowoc Cranes, moving facilities out of the county and leaving our county's workforce with less STEM prospects. In a rural community such as ours, these losses are seismic. Droid Rage was founded as a unique opportunity to address these losses and continues to work to REVITALIZE STEM in our area.

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?

Our mission is to spread FIRST throughout Northeast Wisconsin. We host OUTREACH events such as a STEM fair, and weekly STEM activities at the county library and YMCA. We also participate in parades and the County Fair, sharing FIRST. In the last 3 years, we expanded beyond our county borders to impact our community. The most visible evidence of our success is that students in each of the 7 High Schools and 9 Middle Schools in our county now have access to a FIRST team in their school district.

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

Droid Rage is INSPIRING Wisconsin by helping our members further develop leadership skills. We assist teams as junior mentors for all levels of FIRST and volunteer at local tournaments as judges, referees, and more. We have presented at the Wisconsin Chairman's Exchange. In 2019, our team helped create a student leadership board with all 5 FRC teams in our county. Lakeshore FIRST Robotics Program (LFRP) works together at our Educational Center in order to foster more opportunities for mentoring.

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

Since 2010, Droid Rage has been DRIVEN to start 6 FRC, 5 FTC, 13 FLL, and 21 FLL Jr. teams. Of those 37 teams, 3 FRC and 3 FTC teams were created in the past 4 years. Students and mentors volunteer their time during the FRC season and beyond to mentor teams. We assist other teams by sharing parts and providing resources. Further, Droid Rage members meet with local sponsors during the summer to secure funds for all Lakeshore *FIRST* Robotics teams at all age levels.

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?

With our leadership, our coalition has built the ONLY full-time FRC playing field in Wisconsin, which we make available to any FRC team in the state. We REACH out to kids and get them excited about *FIRST* through events such as the County Fair and partnering with the local library and YMCA. We also hold summer camps and a STEM fair to teach the younger generation about STEM. Once students get started in the program, we encourage them to keep climbing the *FIRST* ladder to keep our teams growing.

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

The support from our sponsors, Jagemann Stamping, West Foundation, and Lakeshore Community Foundation, is essential to all we ACCOMPLISH. Working closely with 4 other Manitowoc County FRC teams, we founded the Lakeshore *FIRST* Robotics Program (LFRP), a 501(c)(3) non-profit organization. Our collaboration with the Chilton, Denmark, Reedsville and Valders School Districts help attract new students. Without these partnerships the Lakeshore *FIRST* Education Center (LREC) would not have been possible.

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

We understand the importance of including all students who are eager to learn, regardless of age, gender, religion, or financial position. Everyone deserves a chance to be on a *FIRST* team to develop STEM and life skills to use in the future. There is a place for everyone on our team and a cohesiveness that it provides. We embody GRACIOUS PROFESSIONALISM by assisting teams, including sharing parts at competitions, giving advice on fixing a code, or providing ideas for outreach and team growth.

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

EDUCATIONAL hands-on Summer Camps introduce engineering concepts to younger students in our community before High School. Droid Rage members also work with School Districts during Elementary Summer School programs to build STEM interest early on. This way we ensure that we will have new students interested in joining Droid Rage in the foreseeable future. Internally, our captains work closely to mentor their successors, maintaining efficiency and continuity in our leadership.

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

We have developed and rely on THREE ways to foster relationships with sponsors. We recruit new sponsors by bringing students and robots to their businesses to explain *FIRST*. We retain sponsors by inviting them to the Education Center during our Open House and tournaments that we host, providing opportunities for them to see where their money is going. We engage sponsors by asking them to be involved in decision-making for the future of the program during our annual Advisory Council.

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

One area that Droid Rage sees as a place for growth is organization. To address this we have identified THREE ways to improve. Our captains have developed subgroups to allow students to be in charge of their own area. To improve workflow and quality of product, captains created a procedure to delegate tasks. This resulted in more time to complete work and ensure quality. We have also focused on our pit and making it a more efficient space to work.

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

Droid Rage uses the EIGHT Core Values and Philosophies to fulfill the mission of *FIRST*. Through Coopertition we have formed an innovative coalition to spread *FIRST* in our county. We impact our community, helping students to discover a skill-set that they will use to hopefully return to the STEM jobs in Manitowoc county. When we focus on inclusion, our teamwork is indubitably better. And, most importantly, when we practice Gracious Professionalism our team has fun.

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.

From ONE team of 28 students we have exponentially increased the number of students participating in LFRP. Over the past ten years, we have grown to 400 students and 40 teams and expanded all four levels of the program. Our mission,

"Building robots today, to inspire students who will change the world tomorrow," is our founding concept. As a result of inspiring students to participate in FIRST in Manitowoc County, we are making a difference in our students' and the county's futures.

Essay

DEDICATED

Droid Rage strives to create a positive environment that fosters a love of learning and growing in the field of STEM, while building leadership skills to develop the next generation of innovators and leaders. In the last 5 years, over 25 alumni members have returned and worked within the 4 levels of the FIRST program.

REVITALIZE

"Over the past year, the county's average annual wage declined by 1.8%." (2019 Workforce Profile of Manitowoc County, State of Wisconsin DWD) Recently, however, Manitowoc County has lost manufacturing companies, such as Manitowoc Cranes, Mirro, and Hamilton, decreasing engineering and STEM employment opportunities. Droid Rage was founded 12 years ago with the hope that introducing FIRST to the community would help restore manufacturing by increasing skill levels of students today so they are able to contribute to the industry of tomorrow.

OUTREACH

Droid Rage spreads FIRST in our community while inspiring the people of Manitowoc County. We started a STEM Fair which involves hands-on STEM activities for students of all ages. In partnership with the Manitowoc Public Library we created programs such as "Nuts and Bolts about Robots" and "Maker Mondays". As a result we were invited to their Summer Carnival and Trunk or Treat, where we represented all 4 levels of FIRST. Attendees drove robots and kids got to be hands on with other fun STEM activities. While we helped the library they helped us at our STEMfair and brought their own STEM activities. We contacted the Y.M.C.A to host weekly LEGO EV3 camps throughout the summer. Droid Rage also assists with the biannual Nextera Energy Days event at the Point Beach Nuclear Plant to give kids a first-hand STEM experience through various demonstrations and projects. We assist Valders Schools with PTA events, Fall Fest and Color Run, and a local Shoot for Coop group that raises money for Children's Hospital. We also volunteer at a soup kitchen serving food for the less fortunate. We attend off-season competitions as well as Robofest and Summerfest. Northeastern Wisconsin has continually supported us as we continue to give back to the community. This includes 2 supply drives for the local Humane Society and Peter's Pantry.

INSPIRING

Droid Rage founded Lakeshore FIRST Robotics Program (LFRP) a 501(c)(3) non-profit organization 7 years ago. Inviting leaders from area teams, we meet monthly to set a budget, prepare for events, fundraise, and coordinate communication to the Manitowoc FIRST community. Droid Rage mentors make up 40% of the Board of Directors.

DRIVEN

Droid Rage's ultimate goal has always been to involve 10% of all students in Manitowoc County in FIRST. We strived to attain this goal by starting 6 FRC teams - 4 in Manitowoc County and 2 in nearby counties. We are currently discussing starting our 7th and 8th FRC teams at Brillion and Denmark High Schools, in neighboring counties. We are driven to help all levels of FIRST teams. These new teams are part of the 46 total teams Droid Rage has started, reaching over 1000 students in total. This is 4.4% of students in Manitowoc County, making it the FIRST capital of Wisconsin. To support and educate these teams, students and mentors offer their time during the FRC season and beyond. In addition to starting and mentoring teams, we meet directly with local sponsors to financially support these teams. Droid Rage members volunteered over 2200 hours within the 3 lower levels of FIRST in the last year. Annually, we host and run 7 different events for the lower levels of FIRST, including 4 FLL Jr expos, 2 FLL regionals, and 1 FTC regional qualifier. Although COVID limited our in-person tournaments this year, we still virtually hosted 4 FLL Jr Expos and were fortunate to co-host the only FTC hybrid tournament this year in the State of Wisconsin, including an informal State FTC Championship. Further, Droid Rage is co-hosting 4 FRC scrimmages and an unofficial Championship in June and July 2021. Thanks to our dedicated members we have created a safe, educational, and fun environment for students of all ages to be involved in FIRST.

REACH

Droid Rage has been working diligently as a team over the past 12 years to spread FIRST and STEM in our area. We participate in the 4th of July and Holiday parades in Manitowoc, as well as local parades in Valders, Reedsville, and Chilton. Additionally, we invite all 46 teams of LFRP to volunteer in a booth at the Manitowoc County Fair, where the accomplishments of the teams in the previous season can be shown to the public and new students can enroll for the upcoming season. Parents and students can speak directly to Droid Rage members to understand the impact FIRST could have on the student's life. WLUK FOX 11, a local news station that reaches 250,000 viewers, interviewed us about what we do as a team and where our students are headed.

ACCOMPLISH

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By fundraising and sharing parts and other resources, Droid Rage has been able to grow all 4 levels of FIRST in our community. Our members meet with our corporate sponsors to secure funds for all LFRP teams. We have also held multiple travel fundraisers to give back to the students in the program by hosting a brat fry at our local gas station, and bussing tables and waitressing at 5 local restaurants. When we start new teams we also send many of our members to teach the new teams how the various programs work.

GRACIOUS PROFESSIONALISM

Droid Rage students and alumni give back to FIRST and LFRP by starting and mentoring younger teams. When our students mentor these teams we greatly encourage the use of Gracious Professionalism, Coopertition, and the Core Values through every level of FIRST. Droid Rage has launched our Student Leadership Board with LFRP. We meet monthly with the other 4 FRC teams in LFRP and discuss what we could do to support each other and make competitions more efficient. We also plan team bonding activities to build new friendships and get to know each other's teams better.

EDUCATIONAL

LFRP and Droid Rage opened the Lakeshore FIRST Robotics Education Center (LREC) in 2019. This has given us the ability to give teams a home that don't have a place to meet. We offer a manufacturing shop, a full-time FLL Jr area, a full-time FLL playing field, a full-time FTC playing field, and the only full-time fully functional FRC playing field in Wisconsin, which we make available to all FRC teams. We are able to host summer camps to introduce kids in Manitowoc County to FIRST and STEM. The LREC also helps us to show current and potential sponsors firsthand what Droid Rage and LFRP are all about.

THREE: Major Sponsors

Droid Rage would not be possible without the support of our sponsors: Jagemann Stamping, West Foundation, and Lakeshore Community Foundation. Jagemann Stamping believes so strongly in the FIRST Program that they entrusted LFRP with a 14,000 sq.ft. building where we opened the Lakeshore FIRST Robotics Education Center. Without the help of the West Foundation and Lakeshore Community Foundation the creation and continuation of the lower level teams would have been impossible. Droid Rage as a member of LFRP meets annually with our corporate and educational sponsors in an advisory council, where we discuss the future of the program, including the financial stability, growth, outreach to the community, and short and long-term planning.

THREE: Tenets of FIRST

Droid Rage proudly embraces the most important aspects of FIRST - the THREE tenets of Gracious Professionalism, Coopertition, and the Core Values. We strive to incorporate these tenets into each of our meetings, competitions, and especially in all of the teams we help. We embody Gracious Professionalism by assisting other teams, regardless of the form it takes, including sharing parts at competitions, giving advice on how to fix a portion of code, or providing ideas for outreach and team improvement. We exemplify Coopertition both on and off the playing field. We have presented at the Detroit Championship, assisted with the Chairman's Exchange, helped the other LFRP teams practice Dean's List interviews, and attempted to assist as many teams as possible, even in the heat of competition. Our program has impacted countless FIRST students, providing them with an environment in which they are able to discover new ideas and innovate existing ones. We encourage inclusion by making sure that everyone is able to work to their strengths within each sub-group. Teamwork is exemplified at every meeting, primarily at prototyping discussions and decisions about the robot's design.

EIGHT: Years of Collaboration

Just 8 years ago we were considered the best kept secret in Manitowoc County. Since then we have been working to change our marketing strategy and now more people in our community than ever know about LFRP and FIRST. Through our outreach events we see the impact we are creating in the people around us. Droid Rage understands the importance of including all students who are eager to learn and work hard, regardless of age, gender, religion, or financial position. Everyone deserves a chance to be on a FIRST team to develop STEM and life skills to use in the future. There is a place for everyone on our team and a cohesiveness that it provides. We are building robots today, to inspire students who will change the world tomorrow.

ONE: Team

From ONE team of 28 students we have grown to nearly 400 students in LFRP. From ONE team we have started 21 FLL Jr teams, 13 FLL teams, 5 FTC teams and 6 FRC teams. From ONE team we have started and formed an entire program in LFRP. With ONE team we have increased the amount of students entering STEM and engineering fields. With ONE team we have created everlasting memories, unforgettable competitions, never ending friendships, and incredible job opportunities. We don't just build robots, we build people.