Chairman's Award - Team 1792

Print Close

2022 - Team 1792

Team Number

1792

Team Nickname

Round Table Robotics

Team Location

Oak Creek, 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.

Round Table Robotics is in its 7th year. In the last 3 years we have been able to keep the team established and increased opportunities for technical and business leaders to develop in high school while continuing to meet in a safe environment. We have had: 13 graduate high school 12 attending college 11 pursuing STEM related careers 12 receive a STEM related scholarship 6 have completed internships or apprenticeships in a STEM related field 4 graduates actively mentor for 2 different teams

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

Oak Creek is located in Southeastern Wisconsin. Our dynamic community has manufacturing, logistics, and retail opportunities for employment. Here are some of our recent highlights: In 2019 and 2021, we hosted FLL Regionals. We were Oak Creek 4th of July parade participants in 2019 and 2021. We also ran a live stream of the parade for community members to see. Since 2018, we have run the Oak Creek STEAM Fair that takes place every Spring. This event was even able to go virtual during Covid.

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?

Team 1792 is part of a larger STEM club, allowing year-round projects and inclusivity. We host a STEAM Fair every year and have been able to sustain this by going virtual in 2020 and 2021. To generate interest in STEM Club and FRC we participate in events like: Ninth Grade Orientation, Oak Creek National Night Out, Oak Creek 4th of July Parade and the South Milwaukee Heritage Days Parade. These initiatives keep us engaged and visible to new members. Results are measured by new freshmen.

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

Our STEM Club is all-inclusive. We have started 2 new levels of FIRST in our area, and 3 major STEM events. Safety is #1: We use a color coded carabiner system to track equipment training and have weekly safety briefings. We outfitted our sponsor, Zund and the Oak Creek Police Department with sanitizing supplies during COVID. We were able to issue global certifications to students on our team and have started to teach this to other groups in our community.

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

Mentored 13 FLL Jr Programs and 4 FLL teams in our local area in 2019. This program included: 4 Milwaukee Public School teams 2 community teams for private schools who don't offer STEM classes Local teams that provide sustainability Hosted FLL Regional Events in 2019 and 2021.

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?

During COVID our team was fortunate to have a grant that funded a Festo MecLab. This equipment allowed us to issue a globally recognized certification, NC3 Festo Introduction to Mechatronics, internally to our team. This helped us to continue to train students in a complete automated system. We are now doing outreach to Girl Scouts on FLL Teams. FarmBot continued to be an ongoing project this past year providing fresh produce for our local community. We are planning our crops for Summer 2022.

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

We work with the following organizations: FBLA- Workshop Make-a-Wish Foundation- Fundraiser Hunger Task Force- Produce Donation Scouts BSA- Clinics Girl Scouts of Southeastern Wisconsin - Certifications Oak Creek Police Department- Sanitizer Donation Milwaukee Fire Department- 3D Mask Clips Our sponsors include: PPG Rockwell Automation Regal Rexnord Zund Everbrite NC3 Yaskawa AIM Jensen Nucor Water Stone Bank Oak Creek-Franklin Joint School District Oak Creek Lions Club Maestro Motor Works

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

Round Table Robotics is open to any student at Oak Creek High School and we actively recruit members of any race, ethnicity, religion, and/or gender. These efforts have grown our representation to include African American, Hispanic, Asian, and other ethnicities. Our efforts to promote FIRST in all communities involve working with Girl Scouts of Southeastern Wisconsin, FLL Teams within the Milwaukee Public School System, and introducing younger students to STEM careers and CTE opportunities.

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

We have a four-year business plan that guides activities and keeps RTR on track. Every FRC member mentors FLL Jr and FLL teams to create a pathway into high school STEM Club. Our FLL competition is the largest in the state with student leaders on the planning committee. We have SOP's and historical documents to ensure consistent and quality events with change in leadership. Our organizational plan includes an upperclassman CDT captain with an underclassman co-captain to promote sustainability.

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

Throughout the pandemic we have been able to stay connected with our sponsors through Zoom, email and consistent communication. Each week during the build season we publish a video recapping the work of the previous week. Although we have not been able to visit all of our sponsors in person, we have been able to connect and even gain a couple new sponsors. The other new initiative we have promoted is growing our Social Media footprint through engagement with friends, family and sponsors.

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

Being in our 7th year as a team we have had our ups and downs. One area that needs improvement has been brought on by the COVID Pandemic. Student to Student training has been a hallmark of our program. The loss of most of the 2020 season and the 2021 FIRST At Home Season has created a gap in our ability to have a continuous path. Moving forward it is our main goal to provide excellent training opportunities for the future of the graduates and returning students.

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

Our goals can be summarized in our Core Values that are recited at the beginning of every meeting: SAFETY IS NUMBER 1! We are ONE team. We seek to have fun over being right. We are respectful. We are always learning. We are helpful. We work hard. We are R.T.R. We strive every day to make our team, our school, and our world a better place. We've made many changes to improve safety on our team, by pit shut down checklist, updated safety binder, and MSDS sheets.

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.

One of the unique aspects of our organization is that our robotics team is part of a larger STEM Club. This allows for students to participate at any level they feel comfortable. We have found that this has opened up more opportunities for a

diverse group of students at Oak Creek High School. Some students only participate in non-FRC projects that still expose them to STEM related topics and career options.

Essay

Round Table Robotics (RTR) has been "gearing up for tomorrow!" for the past 7 years. Our team has been actively living our motto by expanding STEM throughout the nation. This helps us fulfill our mission to inspire the expansion of STEM everywhere by fostering leaders, maintaining a well-rounded team, and aiming to make our community, and eventually the world, a better place.

OUR TEAM
Five years ago, we expanded our FRC team to be one aspect of an overarching STEM Club. This expansion allowed us to increase inclusivity and expand our club to include year-round projects. STEM Club ensures that students at any level of availability and interest have an outlet to innovate, design, learn, and create. We currently have 28 members.

The RTR component of STEM Club is a varsity sport and is structured rather simple. The two components of the team, operations and technical, each have a captain that leads multiple members under their wing. With this leadership, there are numerous component design teams, or CDTs, including media, marketing, drive train, and manipulator. Each CDT has an upperclassmen captain and an underclassmen apprentice to ensure sustainability for the future.

BUILDING LEADERS AND PROBLEM SOLVERS
RTR aims to build character within the members of our team. We begin each meeting by reciting our core values. Each year-round STEM Club project increases leadership opportunities to provide real-world situations in which students can use these core values. Our projects include building 3 additional robots in the offseason: FarmBot, ParadeBot, and test chassis. We make sure to involve our community by showcasing our ParadeBot in 2 parades and the Oak Creek National Night Out.

Our alumni's success clearly indicates we are achieving our goals. Out of the 13 alumni of the past three years, 11 are pursuing STEM related careers, 12 received a STEM related scholarship, and so far, 6 received internships. Some places our alumni have participated in internships are Tesla, Rockwell, Peterbilt, Regal Rexnord, PPG, and Zünd.

COLLABORATION
RTR thrives through collaboration with our sponsors, programs, other teams, and online resources. Our close and inclusive relationship with our sponsors helps us maintain a stable financial position. We strive for personal connections by providing In-person demonstrations on-site at sponsors' businesses. We continue to include our sponsors through our open-door policy, personal invitations to our events, and weekly update videos during build season. After the build season, we follow up with a thank you tour. We go to our sponsors' businesses, demo the robot, review the season's success, and express our gratitude for their support. In just four short years, our sponsorships grew from 11 to 20 companies. These companies return each year as they see the impact of their support on our students and community. This year we partnered with the Make A Wish Program. Like FarmBot, this relationship links tech with service to others. We are currently fundraising for the program by hosting a Jail and Bail event by partnering with our sponsor Zund, to raise the maximum amount of money.

FIRST FOR EVERYONE
There was no FRC team in Oak Creek before 2015, so a group of students split off from a community team to begin RTR at Oak Creek High School. As a result, hundreds of students have had access to STEM learning and activities. Oak Creek also lacked any STEM at the elementary level, and its middle school FLL teams were slowly dwindling. RTR responded by annually mentoring FLL teams.

Soon we realized a more sustainable solution would be to create a feeder system into FLL. In 2018, we developed an FLL Jr program in our community. Continuing in 2019 with 11 FLL Jr teams. We have been on hiatus for 2020 and 2021 but anxious to work with the new program in 2022. These teams are entirely mentored by our team; 100% of the students on RTR mentor either an FLL Jr or FLL team.

Pre-pandemic we recognized that many new teams were struggling financially. We created a solution: the Super Duper Sponsorship. We worked with our sponsors, PPG and Zünd, to connect rookie FIRST teams with sponsorships. Through this collaboration, $35,896 was provided to 12 teams nationally. As the endemic approaches, we hope to renew this effort as our sponsors engage with us more.

RUNNING COMPETITIONS
We have run 4 FLL Regionals and 2 FLL Jr Expositions. Our annual FLL Regional has grown to be the largest FLL event in Wisconsin. Prior to the restructuring the goal was to expose FLL Jr teams to see what robotics looks like at the FLL and FRC level, so we held the FLL Jr expo during the FLL tournament.

STEAM FAIR
In addition to our FIRST involvement, we started the Oak Creek Franklin Joint School District STEAM Fair in 2019. It is a platform for students of all ages to compete with STEAM-based projects. Our first STEAM fair had 56 students in 15 groups competing. We awarded $17,500 in scholarships. The pandemic was not going to stop our progress. In 2020 and 2021 our STEAM Fair was virtual and able to engage students via Zoom. This year we intend to return to an in person STEAM Fair in April of 2022.

FARMBOT
Our FarmBot project broadens our horizons while helping those less fortunate. FarmBot is an autonomous farming robot that plants, waters, and weeds its own produce garden. It has been installed at our local Hunger Task Force and at Zund. We have grown 30 pounds of greens, 148 carrots, and many bunches of fresh cilantro and parsley. Our bounty has been donated to seniors in need and given to members of our community.

FBLA REGIONAL LEADERSHIP WORKSHOP
The FBLA Regional Leadership Conference for 601 members and advisers from across 21 schools was hosted at Oak Creek High School on February, 5, 2022. Our team recognizes the importance of a strong business leadership for FIRST Teams and wanted to make sure other schools had a business and marketing team like ours. To foster future collaboration we hosted a workshop, "STEM, Robotics and Business: How to engage within your school network." The goal was to connect FBLA members with their high school robotics team further expanding in roads to FIRST Team. We utilized NFC cards loaded up with information regarding our workshop, their teams, and our social media. Two students from each of the 21 schools were given tickets to attend our workshop, in which many participants left with the hope to grow their FIRST Robotics team. After our workshop, all participants left with information on how to start a STEM club and how to improve their robotics team.

INDUSTRY RECOGNIZED CERTIFICATIONS
During the Pandemic our team was fortunate to have an additional grant that provided the funding for equipment to offer an industry recognized certification. The NC3 Festo Introduction to Mechatronics offers this opportunity to our students. Our members that achieve this certification have significantly grown their knowledge in Mechanical, Electrical, PLC, Sensor, and Control Technology. We have had 35% members of our team earn this complex and impactful certification. We have since expanded the reach of this project to two 6th and 7th grade FLL Girl Scout Teams.. This allows our team to expand the knowledge of FIRST in our community.
Our next goal with this certification opportunity is to offer it to members of our community looking to change careers. In partnership with the Oak Creek Library these classes will start to take place this Spring.

SOCIAL MEDIA
RTR also utilizes technology to foster communication. Our website was built entirely by our student marketing team, used as a hub for our calendar, blog posts, and information on our activities. We also publish our past award submissions as a resource for other teams. To further collaboration with other FIRST teams, we run active Facebook, LinkedIn, YouTube and Instagram channels. Our team worked effortlessly to reach our marketing goal for this year doubling our social media presence and followers, while enacting our Marketing Plan.

Weekly videos, during build season, are created and sent out to sponsors, family members, alumni, and team members. These are produced in house and have evolved to include spinning graphics, sponsor logos, and lower thirds. During the launch for this year, we had a video Shout Out from Kevin Scott, CTO of Microsoft, he highlighted some of the success of our team and wished us good luck!

SAFETY
Safety is RTR's number 1 core value, and we promote safety uniquely. Every RTR member receives a carabiner that they wear as a quick, visual indication that they are trained in a certain machine. Our safety captain gives a safety briefing at the beginning of each meeting. This keeps our team up-to-date on safety subjects. To expand our safety initiatives beyond RTR, we've participated in 4 trauma kit assembly nights to help the Fire Department outfit the High School and 2 of our industrial sponsors. This year, we've created safety handouts for other teams, created pit shut-down checklists, updated our safety binder, and compiled MSDS sheets.

THE FUTURE
Our motto is "gearing up for tomorrow." We maintain a rolling four-year plan that supports our team growth and our connections to the community. Our specific plans for next year are to expand our sustainable agriculture movement through FarmBot, continue offering industry recognized certifications to our students and community members, and expand connectivity between FIRST FRC Teams and FBLA Chapters across the country.
Round Table Robotics has "geared up" for tomorrow for the last 7 years and looks forward to a bright future. We are built of students who are laying the foundation of strong involvement in STEM, FIRST, safety, and education. Gear by gear, RTR is promising the future that this world desperately needs.