

***FIRST* Impact Award - Team 1108**

2024 - Team 1108
Team Number
1108
Team Nickname
Panther Robotics
Team Location
Paola, KS - USA
Describe the impact of the <i>FIRST</i> 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 <i>FIRST</i> programs as mentors/sponsors.
Robotics is one of only 2 STEM extracurriculars our high school offers; Teach 7 classes to members; helped our members define their future careers through business tours and broadening exposure to STEM careers; multiple business tours in the last 3 years 100% of our alumni graduated high school and sought higher education in STEM; 60% pursue Engineering; improved communication skills and confidence; alumni volunteer, work for FIRST, mentor teams.
Describe your community along with how your team addresses its unique opportunities and circumstances.
Our Community: Small, rural underserved, in Paola KS; population 5,852; 25% of students qualify for Free/Reduced lunches; teaches classes at Miami County Fair; set up local quilt show; workshops at district schools; 75 presentations; 11 carts of food collected for local homeless shelter; volunteer work day at local homeless shelter; Miami county fair booth; robotic panther in parade; City Council Presentation; National Night Out; Heads Up; Fish Fry; BlocktoberFest; Valentine's for Vets.
Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?
STEM day at Kansas capitol; legislative open house; social media posts; 2.9 million reached through Rep. Sharice David's post of FRC Team 1108; teaching at elementary and middle schools; gift bags for girls in STEM; over 75 presentations given; emphasizing "Dean's Homework"; publishing training videos on Youtube; Canbot; attended 2020 national SASA conference; Starting a statewide STEM advocacy conference with SASA; Measure results by the impact we have on members and our community.
Please provide specific examples of how your team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years.
Earned multiple Gracious Professionalism Awards and other accolades; participated in team initiatives like Girls in STEM; run STEM day at the Kansas Capitol for local teams to meet with representatives annually; volunteered at 5 different regionals and championships in 2023; Volunteer at FLL events, FLL

KC Champs judges; assisted teams at regionals we attend through NRLB, over 50 teams helped in 2023 season; starting annual Kansas State SASA conference to advocate for STEM at the capitol.

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

FRC Team 1108 started and continues to mentor 9 FLL teams in last 3 years; assisted other FIRST teams by sharing Impact Award materials; assisting over 50 teams through our NRLB initiative; Zoom meetings to share Impact Award tips with other teams; presented and demonstrated robots at local schools; podcast with FRC teams; mentors taught classes to other FRC teams; published 13 how-to videos; 75 presentations, emails to county schools to start FRC 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?

Hosted STEM summer camps for elementary and middle school students; teach Girl Scouts STEM lessons; Girls in STEM initiative; team mentors 9 FLL teams; give tours of our shop; GoBabyGo; Remake learning days in KC; open house; Flight Night; Science night; STEM day; 1108 day; Discovery Days; middle and elementary schoolers take trips to the high school where we provide fun workshops for them; Teach 4th and 5th grade STEM classes; Enrollment increased by 22 new members; Girls on our team doubled.

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

Ball and Novelis sponsored us to build a Canbot to promote recycling; Powell Observatory-hosted season-end celebration; Optimum grant; SASA-advocacy conference; Louisburg Cider Mill;-fundraising; Knights of Columbus-fundraising and community service; USD368-support, shop, vehicles; City of Paola; KCSTEM Alliance-volunteering, grant; U.S Rep. Sharice Davids and KS Rep. Caryn Tyson; Governor Laura Kelly, SWE-Next-girls in STEM, Miami County Quilt Guild; heads up; Methodist church.

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

SWE-Next -girls in STEM -doubled number of girls on team, ethnicity increased 400%; welcome other schools and homeschool students; allow members to choose their role on the team; communicate through GroupMe so every member has a voice; team vote on robot design; projects & fundraisers; invite foreign exchange students to our team; shop tours; allow non-team members to drive our robot; Team Building with jenga tournament, circle questions,superbowl party, movie nights, Powell Observatory Party.

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

Earned 2 Team Sustainability awards last year; create and abide by budget annually; various active fundraising initiatives; keep financial reserves enough for registration the following year; teach younger students about STEM to inspire them for recruitment; community outreach events to grow awareness of team; assess merits and opportunities for growth of each activity and if we should continue it in future years; instill values and traditions in our new members through mentoring and education.

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

maintain close relationships with sponsors; engage sponsors at awards nights, Open House; email sponsors updates and invite to competitions; reach out to new sponsors regularly. Current sponsors: The Baehr Foundation, Dean Scherman Memorial Fund, KC Stem Alliance, USD #368, City of Paola, Kalmar, Optimum, Paola High School, Family Center Farm & Home, Ball, Novelis, Splashtacular, Knights of Columbus #1149, Design4Sports, Miami Co Quilt Guild, Louisburg Cider Mill, Paola Methodist Men.

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 for our team is safety protocols which had not been updated in several years; this year we updated safety contracts and had all members sign; we revamped our safety plan for the shop and competition; all veteran team members trained in hands-only CPR; mentor taught safety and basic first aid course to educate new members and remind veteran members and mentors the importance of safety; restocked all first aid supplies; put up new shop safety signs.

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

Our goal is to introduce our students to robotics and expand FIRST and STEM within our community; One of two STEM extra-curricular activities in our community; started 9 FLL teams we continue to mentor; teach classes on engineering and machinery; teach STEM classes and give local presentations; our alumni report FIRST increased confidence, technical skills, and communication skills; alumni improve our community through volunteering and jobs in technology, engineering, and medicine.

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.

Our team has developed a unique relationship with our K-9 community in the last several years. We have built a wheelchair for a dog that tragically lost its hindlegs in an accident. We also have engineered and installed an agility element for our local dog park each year. Our team designs these elements, gets approval from the City of Paola, and installs them in the dogpark. This year, our project was agility poles so that local dogs can get valuable exercise. .

Judge Feedback

Who/When

Feedback

Apr 06,
2024
10:27:10
AM EST

Was there anything in our award submission that you felt was missing?
An area the team has an opportunity to improve.
Something that really impressed the judges.

Essay

FIRST Team 1108 Panther Robotics is geared up and ready to build not just robots but people too. The values of FIRST are the tools that we use to build our people: discovery (flashlight), innovation

(hammer), impact (drill), inclusion (tape measure), teamwork (glue), and fun (level). We happily call Paola, Kansas, a town with 5,852 residents, our home. This rural community has been supportive of the team since its beginning, and for the past 22 years, FRC Team 1108 has directly impacted 113 student members. Our alumni have pursued careers in education, programming, medicine, and engineering. In Dean's Homework interviews this year, 1108 alumni report that FIRST has given them the tools to be gracious, positive, successful, and professional individuals in all walks of life. Many of FRC team 1108's alumni continue to devote themselves to FIRST by volunteering, working for FIRST, and starting, mentoring, and supporting teams across the nation.

As one of two STEM extracurricular activities in our community, we embody the value of discovery by lighting up learning opportunities for our students. Our 7 classes ranging from safety to circuits give hands-on experience. These illuminating classes are taught by mentors, community members, and upperclassmen. We share this knowledge with other teams at local FIRST conferences where our mentors provide lessons on technical skills and community outreach. FRC Team 1108 mentors create "How To" videos to shine light on the importance of programming skills. Over the last 2 years, many team members focused on improving their CAD skills. Along with hands-on STEM skills, team members have discovered new communication skills and increased confidence through their participation in FRC Team 1108. It has also helped our members define their futures through business tours and exposure to STEM careers. In the last 3 years, 100% of our alumni graduated high school and sought higher education in STEM with 60% pursuing engineering. We expanded our knowledge base last season by experimenting with a swerve drive train. This year, we are switching the light of our focus to programming new lights and sensors for our robot.

FIRST Team 1108 nails innovation to solve problems and give back to the community that is so supportive of us. We have designed, constructed, and installed multiple pieces of agility equipment for our local dog park. The team built a custom wheelchair for a dog who lost her back legs in a tragic accident. FRC Team 1108 built a car for a child with special needs at Go-Baby-Go. Members also appeared on 2 separate news channels during Go-Baby-Go. In past years we have had struggles with enrollment numbers due to the size of our school. Thanks to our recruitment efforts, we had 22 new students at new member night, bringing our total to 37 members. We nailed it! We also use our innovation skills to hammer home the importance of STEM and STEM advocacy in Kansas. We welcome elected officials and community leaders to our annual Open House where we demonstrate our robot and share our impact. We run STEM Day at the State Capitol each spring with FIRST teams from all levels of competition to broaden and grow awareness of STEM and FIRST. This year, FRC Team 1108 is working with SASA to create the first annual Kansas State Advocacy Conference, which will occur in April 2024.

Impact is the most important tool in our toolbox. We use it in everything we do. We drill the importance of community service into our members. FIRST Team 1108 has volunteered at 13 different FIRST competitions since 2021. We have given over 70 presentations throughout our region to spread FIRST and demonstrate its impact on today's youth. Our food drive initiative, Santa's Sleigh, has donated 11 shopping carts of food, plus monetary donations to a local homeless shelter. As a team, we take every opportunity to introduce all ages to STEM. We participate in events at local churches, schools, and community organizations to spread FIRST's impact. Whether it is presenting to second graders or making circuit valentines for veterans, we strive to impact people of all ages. For the younger crowd, 1108 currently mentors 9 FLL teams, all of which we have started in the past 3 years. Members of FIRST Team 1108 attend 4th and 5th grade STEM classes to teach simple circuitry and robotics while simultaneously introducing them to FIRST. We run workshops for middle-school students to drill the

importance of shop safety. We host STEM summer camps to introduce elementary students to STEM. This year, Dean Kamen gave us homework to share our FIRST experiences. We interviewed 1108 alumni to learn more about 1108 and FIRST's impact on their lives. We shared their stories on social media to inform the world of the impact of FIRST. Another way FIRST Team 1108 has drilled our impact is through the Can-Bot. In 2023, 1108 received a grant from Ball and Novelis to design and build a can crushing robot that can be replicated by other teams. Our Can-Bot helps our community by providing a proper way to dispose of aluminum cans. While we strive to impact all, whether it is presenting to others or creating the CanBot, our initiatives would not be possible without our amazing sponsors: The Baehr Foundation, Dean Scherman Memorial Fund, KC Stem Alliance, USD #368, the City of Paola Kansas, Kalmar, Optimum, Paola High School, Family Center Farm & Home, Ball, Novelis, Splashtacular, Knights of Columbus Council 1149, Altice, Design4Sports, Miami County Quilt Guild, Louisburg Cider Mill, and Paola Methodist Men.

In our team, we take every measure to ensure everyone feels safe, at home, and included within our team. For our design process, we have a voting system that allows everyone to have a voice. FRC Team 1108 is the only team in our county, so we allow students from other schools to join our team. We also go to local teams and help them during build season. We stretch out our tape measure when we video chat with teams across the country when they need help. Our No Robot Left Behind (NRLB) program prioritizes inclusion. Through NRLB, FRC Team 1108 even drove another team's robot when they couldn't make it to day one of competition in 2022. We always have extra parts, labor, and expertise to allow other teams to participate in the competition if something unexpectedly malfunctions. By assisting over 50 teams in the 2023 season, we know that our NRLB initiative leaves a measurable impact in the FIRST community and we are ready to help more teams this year. Through our Girls in STEM initiative, our female enrollment is off the charts. In 2021, there were only 5 women on the team and 4 were rookies. There are currently 11 women on the team, 7 being rookies. Our ethnicity numbers quintupled from one individual of ethnicity in 2021 to 5 in 2023. We are proud of our measurable improvements regarding inclusion.

Every person, from Senior to Freshman, has the opportunity to work on our robot to guarantee it is fastened together. It creates stronger bonds between all team members. FRC Team 1108 has team bonding games and activities throughout the year to glue us together as a team. These activities challenge us to problem solve and others encourage us to answer questions so we can learn more about each other. We have our annual Night at the Powell Observatory, where we connect with team members, families, alumni, and sponsors who can't help sticking around. We also have traditions like our Kick-off party and our holiday gift exchanges that allow us to build stronger connections and build camaraderie. We host training days where veteran team members and mentors unite to teach rookies how to properly and safely operate the equipment and machinery that is vital to build the robot. Everyone wins on FRC Team 1108 training days. The new members learn valuable skills that stick with them, and our veteran team members gain experience spreading skills to others. This increases our productivity and guarantees that we are ready by the time our first competition rolls around. FRC Team 1108's dedication to teamwork has been recognized with numerous Gracious Professionalism awards and various accolades.

FRC Team 1108 strives to keep our level balanced between work and fun. We regularly have activities, challenges, and competitions within our team to keep every mind at a happy medium. Our favorite competitions include designing bottle rockets and participating in weekly brain games. These activities allow us to balance competing like crazy, while learning the importance of Gracious Professionalism. We

let our creativity soar as we create buttons, flyers, and even handmade paper. We always have fun helping our FLL teams as they strive to achieve their goals. All 12 of the team members who volunteered at Kansas City FLL championships at Crown Center said they loved seeing the younger members of FIRST. One of our priorities is making our “fun”draisers truly fun. One of our favorites is at the Louisburg Cider Mill, where we dress up as zombies in a corn maze and scare people who walk through. Our team members love designing costumes and creating their own scary looks. We even taught Paola's Girl Scout's how to do Zombie Make-up. This year we were asked to bring our zombies to a communal hayride which increased our “fun”draising. Another way we dish out our “fun”draising is our annual fish fry.

Overall, FIRST Team 1108 has filled our tool belt with discovery, innovation, impact, inclusion, teamwork, and fun. Our team spreads the core values and FIRST's message to the world, through our SASA Conference, NRLB initiative, Youth outreach, and a plethora of other events and activities. We give back to our amazing community and show the world how important FIRST and STEM are. FIRST has filled our tool belts and has prepared us to hit the nail on the head of any challenge we may face.;

