

FIRST Impact Award - Team 3937

2025 - Team 3937

Team Number

3937

Team Nickname

Breakaway

Team Location

Searcy, AR - USA

Describe the impact of the *FIRST* program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in *FIRST* programs.

Over the past 3 years, our average team size has been 26 members. 3 years of statistics show: 100% of team members graduating from high school compared to the AR graduation rate of 88%; 94% continuing to college, compared to the AR state rate of 42%; & 61% pursuing a STEM field career. 44% of our current mentors are alumni & 30% of recent alumni have volunteered for at least one FIRST event.

Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.

Our town is a rural university town of 23K+ with a poverty rate of 22.8% compared to the state average of 15.4%. Only 37% of the population has an Associates Degree or higher, & 51% of local students are identified as low income. There are 3.4K+ kids in foster care in AR, 2.4% of which are in our county - compared to the state average of 1.3% per county. These statistics are guiding our community outreach as we create accessible STEM opportunities.

Describe the team's methods, with emphasis on the past 3 years, for spreading the *FIRST* Mission in ways that are effective, scalable, sustainable, and creative.

Our outreach is organized by our 5 Es of Opportunity: Excite, Engage, Equip, Empower & Expand. This systemic methodology guides our initiatives to ensure “Every Kid Can” (succeed in STEM) in our community & state. Members learn about the Es at our annual orientation & participate in & plan outreach events aligned to these Es. Since implementing this methodology, we have reached 10K+ individuals in our community & across AR & have spent 1000+ hours assisting &/or mentoring 15+ FIRST teams.

Describe your team's goals and the progress you have made towards them to fulfill *FIRST's* Vision.

We believe “Every Kid Can” succeed in STEM. We aim to support/create sustainable, inclusive STEM learning opportunities that inspire confidence within all students & teams we serve. Since 2022 we have participated in &/or supported 30+ events, including: camps/extracurricular programs, interactive STEM events, events for teams & robot demos. Through this we’ve reached 90% of 4th-6th graders in our community. We have also assisted 100% of FRC teams in AR & all FIRST teams in our community.

What impact has your team seen from your efforts described in the above question? How does your team measure impact?

We define effective impact as an investment into the communities & FIRST teams in AR. We measure impact not just through these events we host/support, but also through the repeated interactions that occur through these events. Using spreadsheets to record participant numbers, zip code data & hours served, we are able to see how investments grow. Over the past 3 years, our reach has grown to include students from 30 schools & interactions with individuals from 64% of AR counties.

Please provide specific examples of how your team and team members act as role models within the *FIRST* community with emphasis on the past 3 years. How do you share these best practices with other teams?

We are a service-focused team; our members annually dedicate 1.5K+ volunteer hours hosting/participating in STEM outreach initiatives/events. 74% of team members mentor other FIRST teams or robotics programs, & we annually host/support 5 events for FIRST teams. We are pioneering legislation for AR robotics teams to be state-funded; we have trained 45% AR FRC teams in advocacy & led 9 other teams in a robotics day at the AR Capitol, meeting with legislators & state leaders to discuss our bill.

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

We focus on sustaining FIRST teams; over the past 3 years we have spent 900+ hours mentoring FIRST teams. We have mentored &/or started 4 FLL & 1 FTC teams. We also provide programming support to teams through virtual & face-face assistance. We have provided over 140+ hours of programming assistance to 10+ FIRST teams. 80% of this is provided during build/competition season. We have assisted 55+ teams at competitions. We have taught 20 workshops & hosted 54% of current AR FRC teams at our shop.

What other initiatives have you created, grown, sustained, or participated in (*FIRST* or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?

Our BIT Kits make STEM fun, easy, & accessible to all. BIT= Building Innovative Thinkers. We have distributed 750+ kits at events & are creating videos to further teach the STEM concepts demonstrated by each kit. Current videos have received 150+ views in 3 months. Our social media reach includes 370+ posts with 850K+ views, & has reached 2.4K+ followers. We also run an annual STEM exploration event for 500+ students; in the past 3 years, we have inspired 1500+ students through this event.

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

We have a 10+ year relationship with Museum of Discovery in Little Rock; this has grown from 1 to 3 annual events. Through this partnership, we have reached 7K+ individuals, 14 schools & raised \$9K+ for the museum. Sponsorships for our Tinkerfest field trip event has grown from 1 to 15 in the past 3 years. Also, we have partnered with 8+ FIRST teams in outreach both at our events & with their initiatives. We have worked with our local legislators to advocate for competitive robotics funding.

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

We believe every person is equal & has immeasurable value; our team has 46.7% minority representation. Through our MoD partnership, we served as guest mentors at their Girls' STEM Camp reaching girls ages 13-14. We assisted 3102 in a FIRST Ladies event at the 2024 AR Regional. Our goal to encourage underrepresented groups to engage in STEM also reaches to include circumstantial barriers. We have recently partnered with a local foster care agency to provide 75+ BIT Kits for their Visit Center.

Explain how you ensure your team and the initiatives you have created will be sustainable.

Our sustainability depends on resources & relationships. All initiatives are included in our annual budget & strategic plan, ensuring that they are sustained from year to year. Our team is built on a structure of departments & department chairs. Chairs & returnees mentor new members as they participate in outreach, learn about our mission & gain experience in specific roles. To eliminate financial barriers to participation, each member completes 40+ volunteer hours per season in lieu of fees.

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

Prior to 2023, our outreach initiatives were unfocused & broad. Over the past 2 years, we have reassessed the needs of our community, state & FIRST teams in the state. We are taking steps to centralize the focus of our outreach efforts. We have developed a strategic plan to guide our initiatives & help us set short-term & long-term goals. Our plan is reviewed regularly by students leaders & mentors to ensure that our outreach efforts remain aligned with our central vision, “Every Kid Can!”

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, particularly noteworthy, or had a large impact.

In 2023, our community was recognized state-wide for leadership in Education/Workforce Development; the community’s support & involvement with FIRST was cited as the primary reason for this. We pour into our community because we see every outreach initiative, team & event as an investment. To us, FIRST is more than robots; it is about the impact we leave behind. We are not just a team, but a family. So, we look out for each other & others in our community; this helps us to overcome challenges.

Judge Feedback

- As a smaller team in a state with fewer FIRST teams, what are effective strategies for communicating the scope of our outreach?**
- An area the team has an opportunity to improve.**
- Something that really impressed the judges.**

Essay

In 2011, rookie FRC Team 3937 Breakaway consisted of 12 students and one mentor who poured their time and energy into the single goal of building a robot. Now, 31 students and 9 mentors pour into our vision that “Every Kid Can!”, by providing Arkansas students opportunities to build the confidence that they, too, can succeed in STEM and shape their own futures.

The pillars of our outreach are our 5 Es of Opportunity: Excite, Engage, Equip, Empower, and Expand. Through these Es, Breakaway makes a measurable, systemic impact in Arkansas.

To EXCITE, we work to raise STEM awareness through community events and robot demonstrations. Over the past 3 years, Breakaway has hosted/participated in 30+ events, demonstrated our robot 16 times, and reached 3.5K+students in grades K-12 from 30 different schools throughout our events. Now the FIRST presence in our community has grown to include one additional FRC, one FTC, and one additional FLL team.

Our partnership with the Museum of Discovery (MoD) is one of our longest standing initiatives. Since 2016, we have been a part of MoD's Tinkerfest STEM festival in Little Rock. We host a tent and use LEGO EV3s to introduce kids to the world of designing and building robots. This event averages 2K+ visitors annually. Two years ago, we began sharing a QR code to a digital collection of at-home STEM activities so that visitors could continue their STEM

exploration beyond a singular interaction. This year, we expanded beyond the QR code by also distributing 350+ BIT Kits (bags packed with individual STEM activities) to attendees.

Because of Tinkerfest's success in Little Rock, we began partnering with MoD and local leaders to start a Tinkerfest in Searcy. This event began as a community festival, but 3 years ago we began partnering with local schools to shift Tinkerfest to be a STEM field trip to the Arkansas Regional. We did this so that more students would have the opportunity to experience STEM in the context of hands-on activities and competitive robotics. This annual event has now grown to reach 1500+ students from 11 different schools across 8 districts and 7 different communities in 4 counties. At this event, students not only participate in hands-on STEM activities, but also experience FIRST through team-guided pit tours, Q&A sessions with teams, and watching matches.

ENGAGEMENT is the goal of our next E. In addition to events, we prioritize building relationships and creating partnerships to make STEM opportunities accessible to everyone. We want everyone to have an access point into STEM. Over the past 3 years, 15 community businesses and organizations have partnered with us to invest in STEM events for the community.

For 10+ years, we have partnered with our school to host a week-long summer LEGO Camp and since 2016 have also hosted a 10-week-long extracurricular LEGO Club; over the past 3 years we have taught 230+ 3rd-8th grade students from 6 communities how to design, build, and code LEGO SPIKE Prime robots. We also partner with other community summer programs. At these programs we lead robot demos, hands-on STEM activities, and discussions about real-world STEM skills. Through these programs, we have reached 50+ students from 10 schools.

We continue to seek new ways to ensure everyone has an access point into STEM. This past fall we established a new partnership with a local nonprofit that works to support children in the foster care system and their families. This agency is one of the few agencies in the state which has a dedicated visit center for supervised visits between children and parents. Upon learning of the need for additional activities for their visit center, we provided 75+ BIT Kits. Unlike the Kits we hand out at community events, these Kits include two activities per bag so that parents and children can work together as they reconnect and rebuild relationships.

Third, we EQUIP teams. Because of a gap in financial and technical support for Arkansas FRC teams, Breakaway prioritizes sustaining current FRC teams before starting new teams. Our goal is to help equip teams with skills that enable them to build beyond the FIRST KitBot and to create sustainable community relationships. We share expertise, space, and resources with all teams to close this gap.

We annually host FRC teams for FIRST Kickoff in January, running this event as a mutual information exchange. We collaborate with teams to teach workshops that cover topics such as data analysis, Java programming, CAD, community outreach, and team marketing. Over the past 3 seasons, our team has taught 20 workshops. After the event, we publish the powerpoints from each workshop in a shared Google Drive so that they remain accessible to teams throughout the year.

With our year-round Open Shop policy, our space and time are available to be used by teams for drive practice, programming assistance, and any other need. We host an annual scrimmage at our shop before competitions begin as an opportunity for teams to practice on a full-sized field and finalize technical components before their initial event. We have hosted 54% of current Arkansas teams at our shop.

Additionally, we have spent 1000+ hours supporting the Arkansas FIRST community through mentoring and assisting 15+ teams. One of the ways we support these teams is through our Programming Initiative. Whether meeting with teams over Zoom calls, in-person, or on-site during events, our goal is to provide assistance throughout the year to help teams perform to the best of their capabilities at competitions. Through this initiative, we have supported 45% of Arkansas FRC teams. This season, we are expanding this initiative with the development of a custom software program that will allow us to be in contact with teams at competitions quicker and easier.

The focus of our next E is to EMPOWER. Breakaway seeks to create and support opportunities where students can demonstrate their newfound FIRST skills to their communities. Over the past 3 years, we have hosted, run and/or supported 12+ events for FIRST teams, serving 95+ teams from across Arkansas and 14 other states.

Our largest annual commitment is the Arkansas Regional. As the only in-season FRC event in Arkansas, it is the closest competition opportunity for 75% of state teams (with the next closest opportunity 4+ hours away). We support this event by assisting with planning, set up, and take-down, by hosting a team social, and by providing technical assistance to attending teams. We also provide opportunities for teams to impact the local community by inviting them to partner with us through our Tinkerfest event held at the same time as the regional.

Additionally, we host and run the Ozark Mountain Brawl (OMB), the only off-season event in Arkansas. Over the past two years, we have grown this event to include workshops for attendees. We also have hosted and run one of the 3 FLL Qualifying Tournaments for the past 12 years. This is the only centrally located FLL event in Arkansas, and without this event, the average travel time to a qualifier for 25% teams would increase by almost two hours.

However, empowerment is not limited to FIRST events. Breakaway members have used their FIRST skills to help with technical and managerial aspects of 8 different community theatrical productions over the past 3 years. We have spent 200+ hours using our programming, CAD, and assembly skills to assist in the creation of props and set elements, as well as coordinate and design light and sound needs for these productions.

Our final pillar is to EXPAND. This core aspect of our outreach means Breakaway is always looking to strengthen our support for STEM and for FIRST teams in Arkansas; we look to make the impossible become possible by tackling and removing barriers.

Arkansas' largest hurdle for robotics participation is a financial barrier. Over the past 15 months, Breakaway has advocated for legislation that provides state funding for all Arkansas robotics teams. During this time frame, we have hosted our district's legislators at our shop, met with members of the Joint Education Committee, and provided pit tours to state leaders at the 2024 Arkansas Regional.

To further strengthen the voice of robotics in our state, we planned a Competitive Robotics Capitol Day for Arkansas robotics teams to advocate for this legislation. To prepare, we hosted an Advocacy Day at our shop to equip the teams attending the event. During Capitol Day, 6 FRC and 4 VEX teams met at the Arkansas Capitol and talked with legislators, demonstrated their robots, and advocated for legislation. Additionally, the entire AR Board of Education and the AR Secretary of Education attended the event, meeting and talking with students about their involvement in robotics. Our voices were heard; the bill now has a confirmed sponsor and will be introduced during the 2025 AR Legislative Season.

To Breakaway, impact is not just a statistic; it is an investment into our state. We are pouring into the state of Arkansas to create opportunities that make STEM accessible, establish resources and support events that further sustain Arkansas FIRST team, and expand the reach of our voice across the state to address the barriers that exist for robotics programs. Excite, Engage, Equip, Empower, Expand - these are the STEM opportunities we are creating in Arkansas for students, families, and teams as we pour into Arkansas so that "Every Kid Can." ;

