

Chairman's Award - Team 1296

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2022 - Team 1296

Team Number

1296

Team Nickname

Full Metal Jackets

Team Location

Rockwall, Texas - 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.

1296 has impacted students by developing interests in STEM beyond the FIRST program. Former 1296 members have gone on to become Google Fellows, attend MIT, design/mill parts for the USS Kennedy & operates a business frequently winning bids on US Government contracts. While we require members to have a minimum of 30 hrs of community service. Students go above & beyond to average 61 hrs with 34% of those hours mentoring younger teams. Our students are OSHA/CPR certified to benefit future careers.

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

Although we live in the smallest county in Texas, we strive to show anyone can do STEM. We spread STEM education locally, nationally, and worldwide. We created and held STEM Gals in our county and had teams attend from other states (OK, LA, NM) & countries (Mexico). While FLL has been prominent in our county, in the past 2 years, our team created the first FLL Jr (18788) & first FTC (17715) teams to give Rockwall residents of all ages an opportunity to be involved in FIRST.

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?

In 2020, 1296 was 1 of 10 teams across the US invited to be a charter member of the Student Association for STEM Advocacy (SASA). We set up booths at competitions with permission from FIRST in TX to attract more interest from other teams to participate in STEM advocacy. The National Advocacy Conference is normally in Washington DC but due to COVID, we helped convert the 2020 & 2021 conferences to virtual. Through our social media and press releases we can track our outreach to the community.

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

One third of our team actively mentors younger teams, providing assistance with hands-on STEM projects & coding. We actively help, host, & volunteer at FIRST competitions in the DFW area. With the aid of 4 other FRC teams, we created the FIRST NTX off season competition to bring opportunities to rookies teams & incoming members of established teams to the FIRST community. We lend our STEM Academy to FRC 6751, a special needs team, to provide the tools to help them be successful at competitions.

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

One of our team members created the 1st FLLE team in Rockwall County. Our team added to the initiative by creating "How to Create FIRST Teams" presentation resulting in the creation of 5 FLLE teams, 1 FLLC team, & 1 FTC team. We mentor these teams by attending meetings/competitions & supporting them financially. Determined to bring FIRST awareness to Rockwall, members decided to plan, organize & host an FLLE Expo in Rockwall. 2021 was canceled due to COVID, but 2022 will be held on Feb 26.

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?

In 2018, we held the 1st STEM Gals event. This featured an all female drive team, female refs/ judges, etc. A team entered with 2 females, these students spoke about their frustration on the "boys team". Ideas were not taken seriously, they did not get to work on the robot, & leadership roles were not given. After STEM Gals, they created an all girls team & grew from 2 to 12 members. In 2019, that all girls team ranked higher at state than their former team. STEM Gals 2022 is being planned.

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 created a bond with Rockwall Ford by creating our biggest fundraiser, the annual Ford Mustang car raffle. This fundraiser allows the team to have the supplies needed to build a working & functional robot & learn STEM. Before our raffle, 1296 families were paying over \$2,000 for a season, now they pay \$20 to attend competitions. We show our appreciation for all sponsors on the back of team shirts that we wear to all events & are invited to our sponsorship night held every year.

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

1296 believes ANYONE CAN DO STEM no matter your ability (females, younger teams & students with disabilities, including deafness), you can do stem and you can learn real world skills. FLLE 18788 presents FIRST Core Values to judges using both spoken word and American Sign Language (ASL). At our STEM Gals event we included ASL signing with singing of the US National Anthem. Later we were approached by a parent whose son was deaf and said it meant a lot to them.

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

By creating & mentoring younger teams, we are creating a pipeline of future STEM leaders. 76% of 1296 comes from younger teams. With the success of our annual car raffle, & the relationships built with our sponsors, we have funds to continue to build robots, learn STEM & compete in FIRST. We created "How to's"; these documents provide step-by-step instructions on various topics located at Rockwallrobotics.com under RoboJackets 4-1-1 for younger teams & teams in other states/countries.

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

Sponsors are included on our team shirt & tagged in social media shoutouts throughout the year. Each year, we hold a sponsor night at our STEM Academy. Team officers give a presentation about what we've learned & how their donation supports the team. We give a guided facility tour & robot demonstration to increase their excitement in STEM. We personally deliver handwritten, "Thank you" cards & "Thank you" plaques to hang at their businesses.

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

We continue to find ways to manage our time & meet deadlines. Historically, we find ourselves in crunch time the last week leading up to competition. We have created a SCRUM board. At the 1st meeting of each week, we go over what needs to be started, what is in progress & what we finished. This allows time for sub groups to update the rest of the team on progress. We set timelines with each SCRUM task to ensure each sub team gets needed time with the robot (electrical, programming, drivers etc).

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

Dean's homework was advocating for the Christa McAuliffe Commemorative Coin Act. 1296 met with US Senators John Cornyn & Ted Cruz who both became co-sponsors of the bill after our visit. The coin design was revealed in the 2021 FIRST Kickoff. We use social media to promote the coin sale & funds raised from the sale of the coin will fund the next generation of innovators. We completed Dean's homework & inspired young people to be STEM leaders by creating & mentoring younger teams.

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.

It is commonly assumed that STEM students are introverts & don't have confidence. Going through the 1296 FIRST

program, we are helping students be self-confident & communicate better. This helps students in college scholarships, internships, & eventually job interviews. 1296 members have learned patience & the ability to teach younger students & students with disabilities. 1296 alumni & students we mentor use learned skills in real world situations becoming a better member of their community.

Essay

Team 1296, Full Metal Jackets, strives to represent the best of FRC, the best of our community & the best of each & every member on our team. Whether impacting future students by advocating for STEM education & funding, hosting all-girl tournaments (STEM Gals), mentoring younger robotics programs, or helping those with disabilities, FRC 1296 knows ANYONE CAN DO STEM. By improving the skills of our team members, providing expansive robotics activities to local residents & volunteering in our community, we are building a bright & sustainable future for STEM in TX.

Since Jun 2017, 1296 assists the community by volunteering over 7,700 hrs, averaging 60+ hrs/yr per student. Members have earned the Presidential Service Award certificate for volunteering 14 times. We value helping our community & the chance to share the exciting aspects of FIRST. We have spread FIRST to more than 7,000,000 people through our extensive outreach efforts at over 260 events over the last 5 yrs. Bringing awareness to STEM, our efforts inspired Rockwall ISD to build a STEM academy(9th-12th)& robotics programs at all elementary & middle schools creating 100+ programs averaging 5 students per team. We assisted in the creation of our sister team FRC 3310 & FRC 7708 & volunteered at robotics competitions (student ambassador training, field reset & judging) since 2017.

In the 2017-2019 summers, select 1296 members traveled to Washington DC to attend the FIRST National Advocacy Conference (NAC). NAC advocates for STEM awareness & funding for Title I schools across the US. In 2017 & 2018, we presented to US Congressmen regarding the Every Student Succeeds Act (ESSA), a bill passed in Dec 2015, but not yet funded. After our successful visit in 2018, ESSA was funded at \$1.2 billion. This funding provides STEM opportunities to Title I schools. We returned to NAC in 2019 & were invited to join the planning committee. Committee members participated in conference calls, pitched improvements & assisted in converting NAC into a virtual conference due to COVID in 2020 & 2021. Building on established relationships, 1296 was 1 of 10 teams across the US invited to be a charter member of the Student Association for STEM Advocacy (SASA). SASA is the parent organization of NAC & aims to promote student involvement in the advocacy process nationally & in each state. By promoting SASA, we are building a network of interested teams, students, mentors, & alumni that will receive monthly communication about legislative updates, state success stories, & advocacy training tips for FRC & FTC teams to start their own state conferences. Exercising these skills, students inform legislators, & secure state support to further reinforce our belief that ANYONE CAN DO STEM.

For the past 2 yrs, Dean's homework has been advocating for the Christa McAuliffe Commemorative Coin Act. Christa McAuliffe was a teacher, mother & astronaut who lost her life in the devastating explosion of the 1986 Space Shuttle Challenger. On June 25th, 2019 our team met with US Rep John Ratcliffe along with US Senators John Cornyn & Ted Cruz. Both senators became co-sponsors of the bill after our visit. We are proud to say on July 9, 2019 the Christa McAuliffe Commemorative Coin Act passed the Senate & on Sept 19, 2019 it passed the House of Representatives, & on Oct 9, 2019, President Trump signed it into law. The coin design was revealed in the 2021 FIRST Kickoff, & funds raised from the sale of the coin will fund the FIRST community & the next generation of innovators.

While attending FIRST NAC in 2017, US Rep John Ratcliffe informed us the US is predicted to be one million STEM workers short by 2022 with women only making up 25% of the workforce. 1296 is determined to lower the shortage of workers nationwide. Four of our alumni are Google Fellows, three attended MIT, one designed & milled parts for the USS Kennedy & another owns a business obtaining contracts from the US Government. Full Metal Jackets created 3 initiatives to further STEM reach: STEM Gals, younger teams & mentoring teams with special needs.

In 2017, we created a new off-season robotics tournament in collaboration with 4 other FRC teams, called the North Texas Tournament of Robots (NTX). In the fall of 2018, in connection with NTX, Team 1296 created a FRC all-girls event, STEM Gals. Woodie Flowers said it best, "Technology needs women more than women need technology". This event emphasizes STEM is for gals as much as guys. This gives female team members a chance to lead in all aspects of the competition, from MCing & refereeing to learning about the different aspects of FIRST. Our unit spread the word of this event throughout Texas, neighboring states & Mexico to attract more participation. In continuing this effort, our team wrote a "How to STEM Gals". This document provides step-by-step instructions for creating & hosting a STEM Gals event. Rockwallrobotics.com has this document along with many other resources (under RoboJackets 4-1-1) for teams in other states/countries. We seek to encourage more females to consider STEM pathways by promoting many exciting opportunities that STEM has to offer. In 2019, our team hosted both STEM Gals & NTX in Rockwall, TX, & plans are underway to host again in 2022.

In Jan 2019, our team collaborated with Rockwall's Mayor to declare STEM Gals Day. In Feb 2019, our team enlightened Texas State Rep Justin Holland on STEM Gals. Understanding the future impact women have on STEM, he established STEM Gals Day for the State of Texas. In order to increase STEM Gals outreach, our team secured the website STEMGals.com, Facebook @stemgals1296 & Instagram @stem_gals. These social media outlets continue to help us accomplish our goal of "Making it Loud" by spreading STEM Gals worldwide & encouraging females to consider pursuing STEM careers. Further reinforcing our belief that ANYONE CAN DO STEM.

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While STEM Gals brings worldwide recognition to women in STEM, we didn't stop there. We educated elementary students to bring STEM awareness to them at a young age, creating a pipeline of future STEM workers. In 2019, team member Austin Taylor established FLL Jr. 18788. When asked why he wanted to create the team, Austin said, "I had amazing experiences when I was on the FLL 13376 team. I want to see other students have the same opportunities." Since the team's creation, 18788 won the Rising Star award at the Plano Expo, the High Five Award at the Mesquite Expo & the Amazing Movement Award at the Rockwall Expo. The team was recognized by the City of Fate for their "effort in expanding the emphasis & passion for STEM throughout their community". Seeing the children's excitement, we wrote a "How To Create a FIRST Team" presentation & held demonstrations to teach those interested in robotics how to start FIRST teams. This led to the expansion from 1 FLL Jr. team in Rockwall County to 6, plus another FLL team & the 1st FTC team. We hosted an FLL Jr. expo at our STEM center in Feb 2020. Due to COVID, 2021 was canceled, but the 2022 expo will be on Feb 26. In 2021, due to our outstanding fundraising efforts & COVID our team had funds to help start additional younger clubs. We set aside \$12K to purchase FLL Spike kits. We are providing these kits to teachers in elementary schools to create new FLL clubs. By hosting an expo in Rockwall, this allows a local opportunity for students to compete. Our hope is these clubs will become competitive FLL teams in the future. Further reinforcing our belief that ANYONE CAN DO STEM.

At the 2017 Dallas Regional, rookie FRC 6751, the only special needs team in Texas, came without a constructed robot. Our team mentored them through building bumpers, programming their robot & guiding them through inspection so they were able to compete. To help them build a competitive robot, we welcomed them to our facility & mentored them by providing our field, shop, time & students. 6751 Coach Tatum says, "My students worked with other teams, but Team 1296 was the 1st team that made them feel like they belonged." At the 2019 Plano District Event, although we were not competing, we accompanied & helped them throughout the competition. Both teams competed at the 2019 Dallas District Event & we are proud to say Team 6751 won the Gracious Professionalism Award. We continued to mentor 6751 by creating their 1st engineering log & adding spirit items. We attended the 2020 Plano District event (even though we did not compete) to support them. In Plano, 6751 earned the Industrial Design Award, was the 8th seed alliance captain & advanced to the State Championship. For the 2021 season, we encouraged them to start their 1st chairman's subteam & were delighted to guide them in essay writing & presenting to FIRST judges. Further reinforcing our belief that ANYONE CAN DO STEM.

Due to district guidelines, 1296 was unable to meet in person during COVID; but we didn't let that stop us from helping our community. We started collecting cell phones for Secure the Call which provides free 911 cell phones for domestic violence victims & COVID patients. Domestic violence victims receive a phone to be able to contact emergency services to stay safe & hospitalized patients with COVID-19 receive a phone to have the ability to communicate with their families when visitors are not allowed. We have collected over 680 phones.

Full Metal Jackets show commitment in everything we do. Team 1296 encourages its members to develop an interest in STEM beyond the FIRST season. Our program provides the opportunity for members to experience real-world engineering projects & enhance our organizational & communication skills. We passionately advocate for STEM funding at state & national levels. This mindset demonstrates our team's focus & builds our character. Through this commitment, our team is stronger, our district is stronger & our community is stronger. We are more than robotics, we are Team 1296 & we believe ANYONE CAN DO STEM.