Chairman's Award - Team 2212

Print Close

2022 - Team 2212

Team Number

2212

Team Nickname

The Spikes

Team Location

Lod, HaMerkaz - Israel

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.

100% of members graduate high school. 96% of alumni enlist in the IDF, 62% of them serve in top military tech units. A Spiker won Dean's List. A Spiker won the Technion Award, receiving a scholarship to the top STEM university in Israel. Two alumni worked in FIRST Israel. All members volunteer and shape the community. Three years ago a member won the 'Volunteer of the Year' award in Lod and in the national competition.

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

Lod has a low socioeconomic rating, many pupils don't have the chance to receive after-school tutoring. Last year, we expanded our Learning Center, 50+ kids get academic help and support twice a week, for ~25 NIS a year. This year, due to the financial effect the pandemic had on families, we made it free of charge. We also overcome language barriers, we get Arabic speaking students involved in the Center and we translate projects to Arabic on a regular basis, thus making STEM more accessible.

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?

One of FIRST's missions is to make STEM accessible regardless of religion, gender, and wealth. In 2020, we gave 700 kids the opportunity to be exposed to STEM when they had no educational activity, with Science from Home. This year we've been to 7 schools, introducing the team. Sharing our cause with innovative teens made 100+ people come to LIGHT. The conference has an effect also on the team. In 2019 28% of 43 team members were girls, now there are 50% out of 44.

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

The Spikes volunteer at every FIRST competition and at the Israeli FIRST headquarters. We published an online programming library which assists 16 teams. We participate in 5 conferences and panels of other teams. We share our knowledge and experience with 15+ teams in our summer workshops. It's our 6th year of being ambassadors of #FIRSTLikeAGirl that encourages girls to join FIRST. The kids we mentor told us they want to be just like us when they grow up.

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

Last year, We met with teams 5654, 5291, 2096, 5554, 1937, 4586, 1574, 5747, 1690, and 2231 to assist with FRC aspects. This year we've opened 4 FLL teams in Lod and 2 in an Orthodox Christian school in Ramla. We mentored 26 FLL and FTC teams. In 2021 we started to mentor 2754, 2755, 2784, and 2785. We mentor FLL team 1059 & FTC team 12989 for 5 years. We have published our Chairman's essay on our website. We created SpikesLib and published it online so teams could use different types of codes.

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?

Two years ago, we initiated a Science Fair. Last year, We expanded it by asking biology students from our school to mentor the participants and guide them in the process. We created an opportunity for 40 kids to learn about STEM, and inspired our classmates to become mentors by giving both groups the chance to engage in scientific research. We opened a robotics club that exposes our 9th graders to robotics and FIRST.

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

In 2020 we cooperated with Krembo Wings, an inclusive movement for kids with severe disabilities. We exposed them to STEM by engaging them in scientific activities. This year, we created a gears based activity, personally tailored for 35+ kids! Since 2020 we have done a bowlathon with 4586. In 2021, we gave 750 experiment science kits to isolated children in Ichilov Hospital, to help get their mind off painful treatments. This year, we handed out 200 kits in Assuta Ashdod Hospital.

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

We brought #FIRSTLikeAGirl to Israel from team 1902, HoF winners from the, and hold a LIGHT conference annually to promote gender equality among different teams. In 2021 we edited the Israeli FLL kickoff video and added Hebrew subtitles to make the video suitable for deaf people. This year to raise awareness of disabilities we filmed a short clip with Krembo Wings where we sang in Israeli Sign Language. We wish to show that anyone can be a STEM leader in the same way anyone can learn ISL.

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

We emphasize the importance of volunteering in all our programs. Team members have responsibilities from the first year, like running projects on their own. They know they could always get help from other team members and our alumni, this is due to our alumni always staying in touch. We send Google Forms after events we hold to get people's opinions in order to improve. We share a Google Drive folder, which includes an organized and accessible record of everything from the last 13 years.

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

Recruiting sponsors is a joint effort and team members are eager to help. Students connect the team to parents that work in different companies. This year we got WIX and Spider 3D Printers to sponsor us, despite the difficulties the pandemic introduced. We uphold our relationship with them by sending monthly update emails regarding our team. During the year, we take part in demonstrations and exhibitions which they have and showcase our robot to their entire staff.

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

Our team has 3 crews. At the start of the season, we noticed we felt disconnected from other team members. We wanted to be unified, and began thinking of possible solutions. We shared a workspace, break times, and made sure each crew knew what the others were doing through weekly summaries. Today, lunch time is filled with laughter, "Thanks to the team I really opened up, I have friends from all age groups. I can walk around the hallways smiling and hug them." Einav. 10th grader from PR crew.

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

We strive to encourage every kid regardless of gender, religion or ability, to engage in STEM by continuously expanding our projects and making connections. With the teachers in our school, we get more children involved in FIRST's mission. For two years, we got our biology students to tutor in the "Science Fair" Our school opened its own Learning Center and put up a wall of fame featuring female scientists, inspired by our actions.

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.

The team is a safe space, everyone feels welcome to initiate, lead, share their opinions and beliefs with no judgment. Our team is a year-round student-led team. We can always rely on mentors to give their perspective without choosing for us, thanks to our special bond. This year we held a 15th anniversary celebration and invited all of our alumni. 70+ of

them showed up, and were delighted to experience the family spirit! Team members were thrilled to hear their stories and make new connections.

Essay

"Don't let anyone rob you of your imagination, your creativity, or your curiosity. It's your place in the world". -Mae Jemison, the first African American woman astronaut in space. For 15 years, we have used our creativity to make STEM & FIRST a place for everybody, and change people's worlds.

INSPIRE YOUTH TO ENGAGE IN STEM
1. School Collaborations
Our school is an inseparable part of us, it houses our workshop, lets us hold events on its premises, and supports our ideas.
This year, we developed and carried out a hands-on physics activity, using gears, to make theoretical material practical. 60 students got detailed explanations from team members about how physics is used in everyday machines.
6 years ago we opened a robotics club for 9th graders, who can't join the team yet. Each year, 15 students are taught meaningful STEM skills.
We take part in our school's open day for potential freshmen, presenting our robot and community work to future team members and exposing FIRST to 100+ kids annually.
In addition, we celebrate The Spikes Day every 22/12, introducing 600+ students and teachers to the team and FIRST's mission.
We also hosted a Science Day for Lod's 6th graders involving FLL-based activities.
We're overjoyed to be a part of a supportive environment and plan to continue this bond in the future.

2. Science Holiday
We believe that everyone deserves the chance to join STEM, regardless of religion, gender, or economical background. We wanted to introduce the magic of science in various schools, so we made special kits in Hebrew & Arabic. Each kit has an experiment that relates to different holidays, a scientific explanation, and the needed materials. Now, kids all over the country can experience hands-on STEM.
Last year, due to the pandemic, we were motivated to think about those who can't go outside. We brought our kits to children in Ichilov Tel Aviv & Assuta Ashdod Hospitals, engaging 1,000 kids in STEM.
Because the interest in the project was enormous, we added a new edition-"Summer Science". During the summer, the kits came with us everywhere, from summer schools to meetings about opening FLL teams. Via our kits, we've exposed 6,700 children to the wonderful world of STEM.

3. Science Fair
Two years ago, we gave primary school students the opportunity to learn biology and chemistry in a fun, practical way- a Science Fair.
For 2 months the kids conducted research and then presented it in front of their peers. Biology students from our school, who support our mission, mentored them during the process. The kids were eager to become scientists, showing their latest discovery.
Last year, we used ZOOM which allowed 5 schools in different cities to take part in the Science Fair. 60+ kids witnessed the positive impact STEM values have on communities.

4. Science At Home
In 2020 we aimed to encourage kids to stay optimistic and keep believing they can be future leaders in STEM. We designed science experiments that can be done at home, and posted them on our social media. Over 700 kids and parents realized that STEM is all around them, even outside the school.

5. Athena
This year, we wrote and coded Athena, an enjoyable program to make Java coding more accessible to youngsters. With the guidance of team members, 35+ kids from an elementary school in Lod wrote different commands to drive our robot through an obstacle course.

INSPIRE THE UNDERPRIVILEGED AND UNDERREPRESENTED TO BECOME LEADERS IN STEM
1. Learning Center
We believe that knowledge shouldn't be kept behind a paywall, and work to break that barrier. Since many families in Lod can't financially support their children academically, 9 years ago we decided to take the reins by opening a tutoring center for 25 NIS a year. Starting with 6 kids, now we tutor 50+ children who once struggled with homework and now show academic improvement.
In 2021, we opened a ZOOM version, The Virtual Guide. Since its launch we have reached more kids. In addition, we inspired the school to open its own Center.

2. LIGHT

We believe that women have a place in STEM like everyone else, so we strive to be a role model to girls across the country.
In 2018, we started LIGHT, a women empowerment conference to inspire girls to follow their STEM dreams. We invited many female business leaders, scientists, and influencers in STEM to give lectures.
In 2021, we held LIGHT via ZOOM and 70 people came.
This year, 100+ people came to support our goal: shattering the glass ceiling.
We added lectures dealing with the gender gap that starts at a young age. We also
brought different organizations like CyberGirlz & SheCodes that encourage girls to pursue careers in computer science.
Additionally, to bring more recognition to women scientists who weren't appreciated in their time, we had a Poster Session- Spikers held lectures about different experts and their contribution to STEM.
Inspired by our actions, our principal created a wall of fame, featuring female scientists.
Together, we're able to make our dreams a reality and proceed to a better future.

3. #FIRSTLikeAGirl
In 2017, we became ambassadors of a campaign started by FRC Hall of Fame winners- team 1902. Together we aim to improve STEM culture by sharing inspirational videos of female role models in FIRST.
In 2021, we didn't let quarantine prevent us from continuing the project. We created #FIRSTLikeAGirl from home, by explaining to the participants how to film the videos in their homes.
We have 6,850 views of over 30 girls from 16 different teams over 6 years.

4. Krembo Wings
Krembo Wings is the only inclusive youth movement in Israel for children with and without disabilities.
In 2020, we led STEM activities in their meetings. Nobody knew how the kids would react since their exposure to STEM was minimal. It was a risk we gladly took. Our vision paid off, "No one has ever presented STEM to them like that. You made them feel so inspired"- Shiraz, lead coordinator.
In 2021, we couldn't meet in person so we customized STEM activities based on each kid's strengths so that they could do it at home with their mentors.
This year, we made a puzzle of wooden gears and let the kids find a pattern that connects all of them. When they successfully made the system work we provided a physics explanation that left them with a spark in their eyes.
We wish to raise disability awareness. We filmed a short clip together where we sang in Israeli Sign Language. That way we reached 420+ people and made them realize that anyone can be a STEM leader in the same way anyone can learn ISL!

INSPIRE THE FIRST COMMUNITY
1. Mentor Seminar
Mentors are an integral part of FIRST, and we want to ensure they get every tool needed to provide professional support.
In 2013, we started our Mentor Seminar as a simple FLL C seminar. Later on, we added FLL E & FTC lectures.
In 2021, via ZOOM, we reached an overall of 200+ live views. We put all the lectures on YouTube for those who couldn't attend.
This year, we added 5 FRC lectures. We kept the seminar in ZOOM as we couldn't physically meet yet, with 13 lectures that had a total of 230 views on YouTube.

2. Summer Workshops
14 years ago, we started our first community project, summer workshops, for new Spikers to learn about FRC. Since then, we have opened our doors to everyone and our bond within the FIRST Israel community grew. Many teams come in to learn, such as: 1657, 2096, 2231, 3034, 3388, 4416, 4590, 4661, 5635, 5747, 5951, 5961, 5990, 6738 & 7112. In 2021, despite the lockdown, we successfully conducted them virtually, proving that knowledge can't be stopped.

3. Contributions for Solutions booklet
Raising money is a difficult task, and we wanted to help other teams prosper. 3 years ago, we decided to take action. After asking FRC teams around the globe for fundraising ideas, 26 teams replied, like: 379, 467, 586 & 810. Thus, the Contributions for Solutions booklet was written.
In 2020, we held fundraisers with 4586 & 4661 to share insights from the booklet and hold fundraising events together.
This year, Covid made it hard to raise money, so we took our own advice. We sold keychains that we 3D printed to students and teachers.

4. FIRST Teams
We aspire to start, mentor, assist teams and publish our resources.
We have published our Chairman's essay on our website since 2016.
In 2017, we created SpikesLib- a code library teams can learn from and use in competitions.
Since 2018, we have started 14 FLL Explore and Challenge teams.
Over the years, we've been mentoring teams:
FLL- 529, 1059, 1199, 1539, 1930 & 2059
FTC- 12989 & 17131
FRC- 5636 & 5961
Since 2018, we have assisted teams, 5291, 4391, 5654, 5554, 1937, 3038, 4461, 2231, 1574, 1690, 5635, 5747 with every aspect of FRC.

This year we started and mentored:
Two FLL E teams in Lod-3055, 3068
Two FLL C teams Lod-2294, 2295
Two FLL C teams in Orthodox Christian school in Ramla-2986, 2987

5. Volunteering in FIRST
Since our inception, we've encouraged our members to contribute to FIRST. Spikers and mentors have been volunteering in FIRST competitions since our first year. We also build FLL kits for competitions annually, and this year we built trophies for FLL C.
This spirit stays with us long after graduation. Countless Spikes alumni have volunteered in FIRST competitions over the years and 7 alumni volunteer in key roles, such as FTAs.
In 2021, we edited and dubbed FLL's kickoff video.
This year, at FIRST Israel's request, we designed the posters for the FLL competitions.

15 years ago, The Spikes were born. As we grew, got creative, and developed new skills, we came up with a motto- "Aspire to Inspire". We live by it every day, bringing FIRST & STEM values to our school, city, and communities.