



# Community Book





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Part I:

# Our Community



## The Community in the Team – Then and Now

With the establishment of the Team in 2017, the community did not have its own dedicated team to manage its affairs within the Team. As a result, community projects were almost nonexistent, and the few that did take place occurred annually without the addition of new initiatives.

In 2019, the Team formed the PRCM team (Public Relations, Community, and Media), which was primarily responsible for design and marketing but also oversaw community projects. The results were moderate—while new projects were introduced, they were neither sufficient in quality nor quantity.

As a result, at the end of 2022, as part of the Excalibur Moving Forward initiative, a decision was made to split the PRCM team into two separate teams: the Community Team and the Media Team. This ensured the establishment of a dedicated team whose sole purpose was to strengthen and improve our community.

That same year, we applied for the Chairman's Award for the first time. Most of the projects we presented were long-standing initiatives from the 2017–2021 seasons (a detailed breakdown can be found in Section B).

**After the season, as part of the Team's debriefing and learning process, its members realized that it was time to give the community the recognition it deserved. As a result, by the end of 2022, more than 10 major community projects were actively running!**

**In total, 13 key community projects took place throughout 2022!**

For comparison, from the Team's founding until 2022, only 9 community projects had been carried out in total! In 2023, the Team maintained its momentum in community engagement, launching 15 major community projects.

Additionally, for the first time, we established a new FRC team—PORTAL #9303. That same year, we applied for all community awards and won the Engineering Inspiration Award!



In 2024, the Community Team continued its extensive efforts, founding new FLL teams, playing a key role in establishing FIREFLY #9739, creating a diverse range of new community projects, and sustaining its previous achievements.

At the same time, the Team contributed to the community even during wartime—whether through donations to soldiers or by supporting the local community. This ongoing dedication demonstrates a deep commitment to the community and a strong desire to continue making a meaningful impact in every possible way.

Thus, from a Team that was not actively involved in community outreach, we transformed into a Team that believes in its impact—one where community engagement is no longer just a value but a way of life.

Winning the Engineering Inspiration Award in 2023 significantly boosted the Team's motivation for community work and helped its members realize their vast potential for making a difference. As a result, every member became actively involved in various projects, and there is no doubt that the Team's community efforts continue to grow and improve.

The Team is committed to preserving every community project, ensuring a continuous increase in initiatives. This way, we can keep expanding our impact without ever taking a step backward.



## The Team's Impact on Its Members

For the Team's members, being part of the Team is one of the most meaningful experiences they have had. The values and goals of FIRST are fully embraced within our Team.

Over **90%** of our members report that FIRST has increased their interest in STEM fields.

Participation in the Team does not interfere with members' studies but actually helps them: **75%** of Team members report that being part of the Team has benefited their academic performance.

**Additionally, 95% of members say they have learned new things, and around 70% have had the opportunity to pass that knowledge on to others!**

For example, members of the Software Team learned about control systems and mathematical formulas during training, which later helped them in their math classes.

In addition, the Team maintains a proper balance between robotics and academics. Approximately **90%** of Team members are taking 5 units of mathematics, and **95%** are taking 5 units of English! Over **85%** of the Team is studying at least one scientific track. On average, Team members are enrolled in about 49 study units.

Approximately **25% of Team members participate in one of Israel's academic excellence programs for high school students**, such as math acceleration, Alpha, or Academy in High School, among others. Additionally, **5 Team members are combining academic studies for a degree while still in high school**. These numbers are significantly higher than the national average.

For comparison, **95%** of our members are taking 5 units of English, compared to only **33%** of students nationwide!

The Team serves as a significant social space for its members; **over 89%** of Team members report that being part of the Team has contributed positively to their social lives.

Beyond the social and academic support, participation in the Team holds deep meaning for its members. **50%** of Team members say that being part of the Team influenced their choice of academic track. Additionally, **85%** of alumni report that the Team had an impact on the life decisions they made.

The alumni testify:



*"During my years in the Team, I learned many management skills and discovered abilities about myself that I didn't know I had. I worked extensively on building work plans, managing and controlling tasks, delegating responsibilities, overseeing procurement and budgets, and many other things that an average 16-18-year-old wouldn't normally get to do.*

*I'm glad I had the chance to be part of this amazing thing called Excalibur and part of this incredible program called FRC. The past three years have been incredibly significant in my life, and I'm sure they will continue to be meaningful throughout the rest of my life."*

— Aviad, Team Alumni



## The Impact of the Team on Its Alumni

The Team is an essential part of the lives of both its members and its alumni. The alumni remain deeply interested in the happenings within the Team and want to stay involved. All alumni report that they stay updated on the Team's activities. Additionally, there is a WhatsApp group where alumni are present and occasionally offer help.

The academic achievements of the Team's alumni are outstanding. The average **matriculation score** of the alumni stands at **110 points!** Over **86%** of alumni report that robotics positively influenced their high school grades, and about **86%** say the Team had a positive impact on their social life in high school. Every alumnus states that robotics helped them manage their time better and become better entrepreneurs.

**80%** of alumni are serving in various technological roles, such as programmers or cybersecurity experts. All alumni credit **FIRST** for introducing them to **STEM**, and they report that the Team significantly influenced their major life decisions.





## Our Core Circle of Impact

Our Team, which was born and thrives in a religious environment, sees one of its central goals as spreading science and technology within the religious community, which, unfortunately, is not sufficiently exposed to this world. To achieve this goal, we initiate and operate unique projects aimed at the religious and ultra-Orthodox sectors. For example, we published information about FIRST and our team in a newspaper that reaches almost every religious-national household and has over **80,000** subscribers. Additionally, we held **FLL competitions for the ultra-Orthodox community**, in which over **3,000** people participated.

As a religious FRC team, we decided to launch a flagship project to establish additional teams within the religious-national community. We ensured the opening of two new FRC teams in Modiin and Givat Shmuel. Together with the "Bnei Akiva" education network, we are currently working on the establishment of FRC and FLL teams in the network's schools, which serve religious boys and girls. **We are making progress with two FRC teams that will be launched by the end of the season.**

Of course, we also operate beyond our immediate environment, and a significant portion of our activities reaches other sectors. For example, the mentor course we held last year. This was the fourth consecutive year the course took place, and it crossed sectors, reaching the religious, secular, and **Arab communities**.



## Role of the Community Team

In the team, there is a Community Team whose role is to coordinate all matters related to the community. The team consists of several members, and each member must adhere to the following guidelines:

### **1. Knowledge:**

A member of the Community Team must have knowledge in project management and planning, as well as experience in writing documents and presentations. We do not expect people to have this knowledge from the beginning, so we provide specific training sessions during the summer break.

### **2. Working with People:**

A member of the Community Team must have the ability to work with people, whether it's providing guidance to team members during projects or managing interactions with individuals outside the team in a representative and appropriate manner during projects they are responsible for.

### **3. Passion:**

A member of the Community Team must have a passion for the community and contributing to others. We believe that the personal example set by members of the Community Team will motivate the rest of the team to take action.

## **Community Project Process:**

Each community project that is carried out consists of four stages:

### **1. Idea:**

The first stage in every community project is coming up with the idea. Sometimes we recommend that the initiator of the idea write a document that defines the project's goals and provides an explanation of it.

### **2. Task List:**

After the idea has been written, the project lead is required to plan all the tasks needed to execute the project. The task list must be as detailed as possible, and it can be written on any platform, although there is a preference for using Monday. At this stage, a team is often recruited to work on the project under the responsibility of the project lead.



### **3. Execution:**

The project lead and their team must execute the tasks outlined, working in an organized manner with the task list and clearly marking the tasks that have been completed.

### **4. Implementation:**

After completing all the tasks, the project lead and their team are authorized to implement the project. However, they must ensure that all tasks have been executed to the highest standard before proceeding with the implementation.



Part II:

# Community Projects



## Java Course

Since 2022, we have been running our Java course, aimed at teaching middle school students the Java programming language at an advanced level. The course follows a weekly lesson format, covering a significant portion of the material required for the computer science matriculation exam. To develop and structure the course content, we relied on courses and materials from the Israel Open University.

In order to equip students with the tools for self-learning programming languages, the course emphasizes logical thinking alongside Java studies. The exercises we provide help students develop algorithmic thinking and gives them the necessary tools to deeply understand software concepts, making it easier for them to learn additional programming languages independently.

**The course is available to hundreds of middle school students from our school, is completely free,** and is suitable for everyone regardless of prior knowledge. We are also available to students beyond lesson hours through a dedicated WhatsApp group, where they can ask questions and receive support from us.

Before each lesson, we plan it carefully to ensure we cover a lot of material while integrating practice questions. To maintain an organized lesson structure and deliver all the content effectively, we prepare a document outlining the lesson plan in advance.

For the Java course, we wrote a unique textbook, created over the summer. This book includes all the material taught in the course, along with additional content related to computer science and mathematics. It also contains explanations on writing code correctly and the basic structure of Java programs.

**See sample pages from the textbook in the appendix: Java Course Textbook 2025.**



## Python Course

Since 2022, we have been running our Python course, designed to introduce middle school students to computer science concepts and fundamentals through the Python programming language.

The course follows a weekly lesson format, with a structured curriculum set at the beginning of each year. Each year, we refine the course based on student feedback and conduct self-reflections to improve both the teaching methods and the course material.

**קורס מדמ"נ 2025**

שיעור 2 - משתנים, סוג מידע, פעולות מתמטיות ופלט



צורת כתיבה

**CODE**

```
name = "Ariel"
age = 14
is_alive = True
weight = 70.5
print(name)
```

**CONSOLE**

```
Ariel
```

Currently, the course has been integrated into our school's curriculum as part of the Scientific-Technological Excellence Program. It is taught by two members of our team, who collaborate closely with the school's computer science teaching staff and coordinate with the administration and relevant authorities.

The lessons are supplemented with learning materials to facilitate both teaching and comprehension. We use presentations prepared at the beginning of each year, along with worksheets and weekly summaries, allowing students to retain the material effectively despite the course's once-a-week schedule.

You can find the information sheets in **Appendix 10**.



## STEM for Kindergartens

This year, we launched a new project: STEM for Kindergartens project. As part of this initiative, we hold interactive sessions with kindergartens at the technological complex in Modi'in. The project's goal is to introduce young children to the worlds of science and technology through engaging experiments and enriching hands-on activities.

So far, we have conducted activities for kindergartens Ein Hemed, Reut, Bareket, Trombone, Har Edom, Tel Hai, and Kochav, and we continue to run weekly sessions. To support this effort, we established a dedicated team responsible for delivering these activities. All sessions are scheduled in advance in coordination with the complex's owner.





## Inventors of the Future

This year, we launched a project called "Inventors of the Future." In this initiative, we introduce children to various inventors who created groundbreaking inventions that changed the world and are still in use today. For example, we present Alexander Graham Bell, the inventor of the telephone, and the Wright brothers, who pioneered aviation.

As part of our session on Alexander Graham Bell, we showcase the evolution of the telephone over the years, bringing different models for the children to see and touch, helping them understand how technology has advanced.

After learning about these inspiring inventors, we engage the children in a creative group activity: each group brainstorms an idea for a new invention.

The children have come up with innovative and out-of-the-box ideas, such as:

A device that detects animal sounds and translates them into human language

A phone that attaches to a wristband for easy carrying

A flying phone

This project encourages creativity and inspires the next generation of inventors!





## Eggicopter

We conducted the Eggicopter activity for 60 fifth-grade students. During this challenge, the children had to drop an egg from a significant height without it breaking. As part of the activity, we taught them principles of physics and engineering to help them succeed. We provided a variety of materials, then divided them into teams to design and build their own protective structures.

After the first drop, we analyzed the results together, discussing why some designs failed. The students then modified their structures based on their observations and attempted the challenge again.

This project fosters creative thinking while applying hands-on physics and engineering concepts in an engaging and fun way!



## Nefesh Fair

Ahead of Hanukkah, we reached out to "Yedid Nefesh," an organization that arranges activities for children with special needs. We wanted to create a meaningful and exciting experience for them—one that connects to the holiday while also incorporating science and technology. This led to the creation of "Nefesh Fair", a festival designed to bring joy and spark curiosity about technology for the children in the organization. The fair featured food stalls, Hanukkah-themed activities, a demonstration of our latest season's robot, hands-on activities with other robots, and a magnet photo booth. During the event, we also celebrated a Bar Mitzvah for one of the children, creating an incredibly joyful and emotional atmosphere.





## Scientific and Technological Support (Big Brother)

As part of our initiative, we launched the **Big Brother program**, which provides scientific and technological support to students. The goal is to create a mentorship system where older students assist and guide younger students in their learning and understanding of complex scientific and technological concepts. This support includes tutoring sessions, project assistance, and providing resources to enhance the students' knowledge. The program aims to foster collaboration, teamwork, and a deeper connection to the subjects of science and technology, ensuring that every student has the tools and guidance they need to succeed.





## Hosting FLL Team

We had the pleasure of hosting an FLL (First LEGO League) team, providing them with a supportive and engaging environment to explore their passion for robotics and technology. During the visit, we facilitated various activities to inspire creativity, teamwork, and problem-solving skills, helping the team enhance their knowledge and skills in preparation for their upcoming competitions. We provided access to our resources, such as robotics kits and expert guidance, allowing the team to refine their projects and practice their presentations. The event fostered a spirit of collaboration and excitement for both the team and our students, reinforcing the importance of innovation and teamwork in the world of robotics.





## FLL Mentorship

At our school, we currently have two active FLL (First LEGO League) teams, which we support throughout the year. We assist the teams in all aspects, both in the robot game and the innovation project. Many of the team members are alumni of the program, so they are equipped with the necessary knowledge and tools to provide support and mentorship to the new FLL teams.

We help the teams with their logistical needs, manage their financial transactions, and coordinate equipment orders. Additionally, we assist with equipment storage and address technical needs. For example, last year, we provided the FLL teams with materials to create physical models for their research project.

In addition to the general support the whole group provides, five of its members act as active mentors for these teams, without adult mentorship. These mentors conduct high-level training for the teams, guide them through building, programming, and the innovation project, and support them through simulations and hands-on exercises.

While taking responsibility for mentoring the teams, we place a strong emphasis on encouraging their independent work. We ensure that the mentors act as facilitators and guides, offering tools and advice but not doing the work for the teams.

The FLL members enjoy the FIRST experience and are eager to continue with it. Almost all members move on to FRC (FIRST Robotics Competition). As an example, **last year, every member of the team continued to FRC**, except for one student!

**The full list of awards can be found in the appendices.**





## Mentor Course

Last year, we held our fourth mentor course for the team. In this course, we leverage the extensive knowledge and experience we've gained from mentoring FLL teams and pass it on to dozens of mentors from teams across the country.

The last course included four sessions, where lectures were given by judges and veteran mentors. You can find the list of lectures from the last four courses in the appendices.

The course was attended by **49 mentors from 34** different teams across the country (see Appendix 1). Over the years, more than 150 mentors have participated in the course!

The goal of the course is to equip each participant with the knowledge and tools necessary to manage a team from the ground up to full success. The course covers every stage of the process—from preparing the team for competition to providing comprehensive mentorship according to core values.

Approximately 70% of the mentors who participated in the course were newcomers with no prior experience. The knowledge and tools they gained during the course enabled them to successfully serve as mentors, despite their initial lack of experience.

The course is open to any mentor, regardless of location. It is broadcast live for those unable to attend in person, and the lessons are recorded and distributed to the entire mentor community in Israel.

The most recent course cycle was officially recognized by the FIRST organization, and it is now included in their official resource map.





## Volunteering with Akim Organization

**Akim Israel** is the national organization that assists individuals with intellectual disabilities and their families. Since its establishment in 1951, the organization has worked towards promoting their integration into society, providing support in areas such as housing, employment, leisure, and rights. Through its activities, it aims to create an inclusive and equitable society for all people.

As part of our volunteer work with Akim Israel members, we planted and nurtured potted plants together, took care of the soil, played board games, engaged in conversations on various topics, and participated in other activities that enriched their time and strengthened the bond between us.





## Baba-Da Collaboration

In 2020, we began collaborating with the Baba-Da organization, which works to promote science and technology among children and youth from the Haredi community. The Haredi community, while deeply committed to Jewish religious practices and values, has historically been **less connected to technology and modern scientific advancements**. This is largely due to a cultural emphasis on traditional religious education and a preference for maintaining a separation from secular, technological influences. However, Baba-Da has been striving to bridge this gap by providing Haredi youth with opportunities to engage in STEM fields through activities like the FLL (First LEGO League) program.

The organization runs dozens of FLL teams, with **over 3,000 children and youth** having participated so far. Due to religious reasons, Haredi teams cannot participate in the regular competitions, so in order to include them in FIRST activities, we organize an annual special FLL competition with the participation of around 400 Haredi children and youth. This competition is organized and managed by us, in collaboration with FIRST, while ensuring that it is a complete and professional FLL event.

**As mentioned, this is a full competition, which includes judging rooms, arena rounds, guidance, and additional elements.** We make sure to plan meticulously and take care of every detail to the highest level of precision. Our team sends many volunteers to the competition and also presents special demonstrations of our robot, offering inspiration and learning opportunities.

This year, we expanded our cooperation beyond the competitions and participated in a sorting day for FLL kits for new teams joining the program. Moving forward, we plan to deepen and expand our collaboration with Baba-Da, with the goal of making science and technology more accessible to an even wider audience.

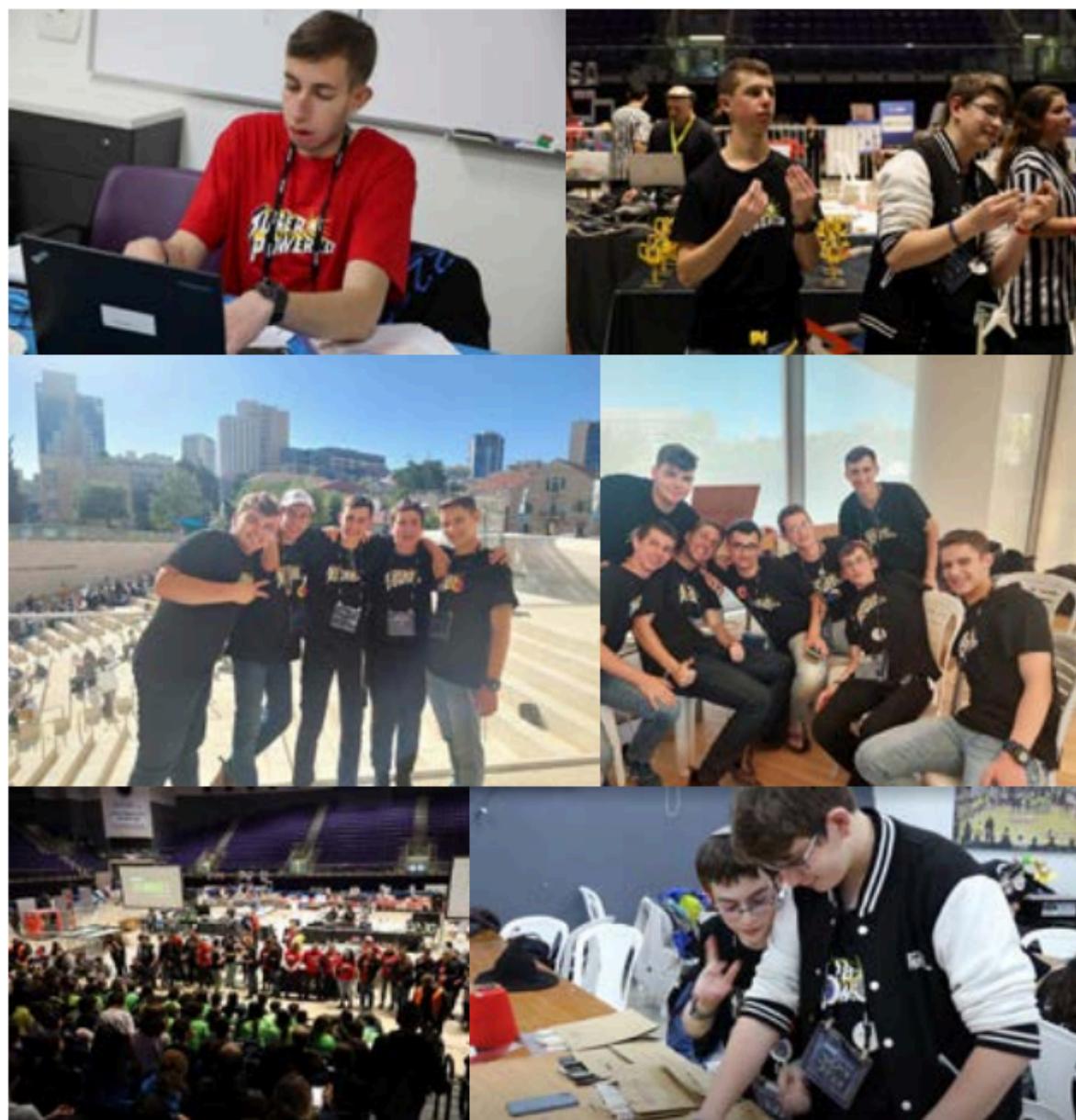




## Volunteering in FIRST

As part of the community activity of the team, team members volunteered last year at a variety of FIRST competitions and events. The total number of volunteer hours of the team members during the FIRST ENERGIZE **season exceeds 850 hours!** Team members volunteered in:

- FLL competitions
- FRC competitions
- Off-season competitions
- Warehouse organization





## Robot Exposure (Excaliday)

At the end of each year, we hold the Excaliday event – the team's recruitment day. During the day, we visit middle school classrooms, present videos of the robot, and explain the team's activities. The highlight of Excaliday is the live demonstration of the robot in action in front of all the students – an impressive event attended by over 200 people.

Excaliday days have grown in success year after year. In 2022, around 30 students joined the team, and in 2023, the number of recruits rose to about 35 students (details about the team recruitment process can be found in the business plan). Beyond contributing to the recruitment of new members, Excaliday events allow us to expose all middle school students in our school to the world of robotics and FIRST, giving them a glimpse into the technological and educational work of the team.

In addition to the Excaliday events we hold at our school, we also organize similar events at other institutions, mainly in schools where we plan to establish a new robotics team. We aim to continue expanding and developing this successful exposure initiative, with the goal of encouraging more students to enter the world of robotics and innovation.





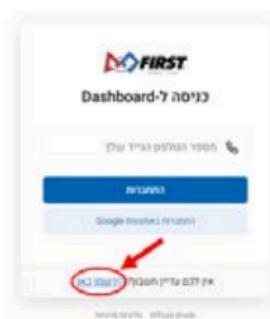
## Creation of FIRST Steps Booklets

FIRST Steps is a community project jointly organized by FIRST service year volunteers, various teams from across the country, including us, who contribute to writing the **FIRST Steps booklet**.

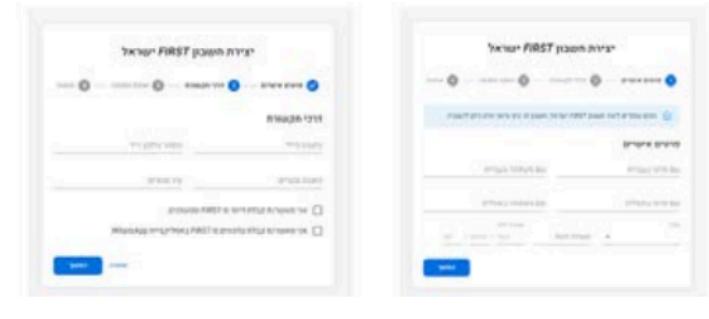
The purpose of the booklet is to teach newcomers to the FIRST organization everything they need to know about the competition, the program, building the robot, and more. Each person or team contributed their part, providing the information they could to help others. This project highlights FIRST's core values, including giving without expecting anything in return and helping those who need assistance.

The project also provided a solution for mentors and new FRC teams or those without prior experience, allowing them to benefit from the knowledge we accumulated during our years in FRC and other FIRST programs, without having to learn everything on their own. The booklet also offered an opportunity for alumni of the program to continue helping others in different teams across the country with the knowledge they gained while being part of FRC and other **FIRST programs**.

3. למי שאון חשבונ: לחצן על "הירשמו כאן" בתחתית



4. ברשום החשבון עליכם למלא פרטים אישיים, דרכי תקשורת, לאשר את טופס ההסכמה של FIRST® ולבסוף לאמת את החשבון באמצעות הודעה WhatsApp.





## Exposure to Robotics for 6th Grade Students

Every year, our school holds several open days where 6th-grade students and their parents come to learn more about the school. We try to bring as many visitors as possible to our workshop, showcase the FRC program, and explain how our team operates. Our goal is to increase awareness of the various FIRST programs, with a focus on children of the right age to join FLL or FRC teams, and encourage them to participate in meaningful technological activities.

Approximately 180 students from several schools around the city attended the exposure evening: Derech Yehuda, Netiv Zvolon, Shivtei Yisrael, Msoat Neriya, Ariel, and Avnei HaChoshen.





## Sword of Science

Starting from December 2023, we have been regularly sharing FIRST and STEM content in a WhatsApp group with about 100 members. Within the group, we share images of the robot, updates about the team's activities, and scientific facts. Our goal is to create a community around the team, and therefore, any content published on one of the team's social media platforms is also shared in this group, in order to expand the circle of those involved and interested.

### Examples of content:

**Message 1 (Top Left):**

אתם קבוצה הרובוטיקה אנחנו מתחדשים ב-FRC, תחרות ביליאונט שטראוסה לפורם מזע וכוכבוגות בקרוב כי נפטר. כל שנה, בחלון ינואר, מוחרכס סרטון הנטגר, בו מופברת והשורה הלהקה שלם טערן להנתר, וזה יכול להיות לעשה מזה, עד לירוח כחורים לבתוב. מרגע קבלת אונר אחר ש כל שבחינו בתקבצן. ליבר, לבנות לאונר ומאפס את הורחות שעננו על הדירות של חונטן, אז כל עוזרים אותו, תיכויסטים אבל 18-15. ביל שום נסיען מתקדם.

כשוננות הבנייה מסתיתת, אנחנו נפזרים עם אאר הקבוצה ברץ ללחחות, בה גורמים מתרחבים כגד הבקבוקים של שאר קבוצות הרובוטיקה בארץ. הראות האהבות כמה שוחרר גקוות על ידי ביצוע המשימות בפהה פהיה וועליה יותר.

אודה מהרשות של הקבוצה, היא להפיץ את מה שאנכם פלוריא ביבות הוחחות. לאנשימים מסביב. לשם קר צ'רמן הוא הקבוצה הזאת, תשאליה בה תוקן של מד ... להמשך

**Message 2 (Top Right):**

**הידעת?**

אמנם לרוב האנשים היום יש טלפון חכם של חברות גדולות כמו אף סמסונג, אבל בעצם חברה מוטROLה, היא שיצרה את הטלפון הנייד הראשון, כבר בשנת 1983!



**Message 3 (Bottom Left):**

**הידעת?**

שם המשפחה גיגל נוצר מטעות כתיב של המשפחה Google שמתיחסת למספר 10





## Sword Of Peace

During the Iron Swords War, we initiated a project aimed at bridging the "distance" between parents and their children. As part of the project, we produced flyers with honest questions that parents can ask their children, such as:

What is the thing you are most afraid of right now?

What are the most important things to you in the family?

(The full flyer can be found in the appendices.)

We printed over 800 flyers and distributed them throughout the city of Modiin, successfully reaching 800 families! After the distribution in the city, we realized the project was successful and started thinking about how to expand its reach. To do this, we worked with our school, which invited the Director of Religious Public Education (Hamad) to take part in the project and help spread it to additional communities. As a result, the flyers were distributed to all families in our school, adding another 950 families to the circle of participants!

Additionally, the flyers were shared with all the directors of public religious education across Israel, a system of education serving over 260,000 students, which significantly expanded the impact of the project.





# Volunteering in the Children's Department at Sheba Hospital

Over several months, we established contact with Sheba Medical Center (Tel Hashomer), the largest hospital in Israel, with the goal of organizing a robotics event in the children's department. In collaboration with the "Giving Hope" organization, we organized a special event where we introduced the children to FIRST, its various programs, and of course, our robot.

The event included three main areas:

**Robot Area** - where the children could come and try operating the robot and watch it in action.

**Information Area** - dedicated to explaining the FIRST organization, its various programs, the history of our team, and assisting children who expressed interest in joining FLL teams.

**Coloring Area** - intended for younger children, with coloring pages related to robotics and our team. In this area, children could come and color and draw for fun with team members.

The initiative for this project came from an older member of our team, who, as a child, was hospitalized for a long period in the same department. From his personal experience, he became familiar with the children's need for enjoyment, positive distractions, and exposure to STEM fields.

Inspired by his story, we decided as a team to carry out the project, with the aim of helping him "fulfill a dream" and close the circle, while creating an enriching and joyful experience for the hospitalized children.





## Visit to the "Palace" Assisted Living Facility

On December 11, 2023, during the Hanukkah holiday, our team, in collaboration with other teams from Modiin, visited the Palace Assisted Living Facility in the city, where we met with the residents and lit Hanukkah candles together. The visit was a touching and enjoyable experience: the residents shared inspiring stories with us, and we introduced them to FIRST and the world of robotics. They were very excited and wanted to learn more. At the end of the evening, we lit the menorah together and sang Hanukkah songs late into the evening, in a festive and familial spirit.

The team members really enjoyed the experience, and even more so, we had the opportunity to introduce the elderly population in our city to FIRST and the various robotics programs, all while having fun and wearing huge smiles on our faces.





# Media Exposure

## Article in "Otiyat" Newspaper

Ahead of the Off-Season competition, we reached out to Otiyat, a leading children's newspaper in the National Religious sector, with over 100,000 subscribers. In the article, we shared our team's activities, both in robotics and in the community, bringing our story to a wide audience of children and teenagers.

The newspaper exposure significantly contributed to raising awareness of our team and the FIRST organization. We hope that thanks to Otiyat's large readership, religious boys and girls across the country were inspired by our story, developed an interest in STEM fields, and may even join FRC teams in their cities.

Following the article's publication, we received warm responses from family, friends, and acquaintances who recognized us in the newspaper. This gave us even more motivation to continue investing in our work.



## Interview on Channel 13

During the season, we were interviewed on Channel 13 News, where we spoke about our team, the FIRST organization, and our community activities, with a special focus on our efforts during the Iron Swords War. Over 50,000 people watched the interview!

## Interview on Channel 7

During the 2023 season, Channel 7 visited us to film a feature that included our team. In the segment, we explained our community activities and introduced the FIRST organization.





# War Community Projects

## Book Donations for Soldiers

At the outbreak of the Iron Swords War, our team launched a campaign to donate religious books to soldiers. Our school had hundreds of unused books, and we saw this as an opportunity to transfer them to troops in the field. Team members organized, packed, and transported the books, ultimately donating around 1,000 volumes! Thanks to this initiative, soldiers were able to study and find moments of respite in gathering areas and on the battlefield.

## Robotics Activities for Children

Due to the security situation, many children were stuck at home at the start of the war with little to do. To help, we invited them to visit our workshop for engaging, free-of-charge tours, aiming to introduce them to the world of FIRST while providing an enjoyable activity and a break from the difficult reality. During the tours, we showcased our work—from operating heavy machinery like CNC machines to 3D modeling and prototyping. Additionally, the children got to see our robot up close and even try controlling it themselves.



## Volunteering with Evacuated Families

At the outbreak of the war, many families, especially from the south, were forced to evacuate their homes and relocate to hostels, hotels, or the homes of relatives. For many, this period was incredibly difficult and challenging. Wanting to do our part, we decided to provide engaging, technology-based activities to help distract them from the harsh reality.

Over the past few months, our team has conducted several activities in different locations. Twice, we traveled to Beit Ha'aracha Macabbim, and on one occasion, we were joined by all



the FRC teams from Modiin. There, we met with evacuated families, introduced them to our robot, explained how it works, and even let them operate it.

Additionally, we visited hotels and community events across the country, where we hosted activities for children and families who had been displaced due to the war. At each event, we introduced the children and their families to FIRST programs, with a particular focus on FRC. The evacuated children were thrilled to see our robot, learn about the world of robotics, and try operating it themselves.

**After each event, many children expressed interest in robotics and even asked for our help in finding FIRST teams suited to their age group and location—we were, of course, happy to assist.**

This project has reached dozens of evacuated families and approximately 200 displaced children!





## Competition Projects

Even on the big day—when most teams are busy repairing their robots, scouting, and handling essential tasks—we always make sure to run a few community projects in parallel. For us, there is no day without community engagement, and we take every opportunity to give back, even in the most intense moments of the season.

### Choco talk

In recent years, during competitions, tensions arose across the country due to the complex political situation. To help bridge divides, our team initiated "Choco Talk", a



project where team members take a chocolate milk pouch and give it to a child from another team, sparking a conversation. This simple act creates an opportunity to get to know each other, talk for a few minutes, and realize that despite our differences, we share much more in common.

Building relationships and friendships with people from other teams and different regions of the country is incredibly important to us. Throughout various events and competitions, we've had the chance to engage in meaningful conversations, share experiences, and learn from one another. Thanks to this initiative, we have formed



new and lasting friendships, enriching our experiences and making FIRST even more special.

### **"The Amazing Race" Project**

At last year's Off-Season competition in Hadera, we initiated and organized "The Amazing Race", a competition designed to strengthen bonds between members of different teams.

In this event, mixed pairs from various teams worked together to complete a series of fun and engaging challenges. The pair that finished all the tasks in the shortest time won the competition. The challenges were simple yet entertaining, allowing participants to connect and get to know each other in an enjoyable way.

To maintain order and safety, each registered pair committed to following the competition's rules and obtaining approval from their team captains. A full list of the challenges can be found in the appendices.



## Helping Other Teams

### Photography Training

In collaboration with Team #7112 Evergreen, we took part in an initiative to provide training sessions on photography and building a strong media presence within a team. We felt that our experience and expertise in this field could greatly benefit other teams, helping them develop and strengthen their media outreach.

### Assisting Teams During Competitions

At District #1 of the 2024 season, held on February 25-26, we established a dedicated competition team called "Pit Assistance." This team, consisting of six experienced members, was tasked with visiting participating teams and providing support in any area needed—whether in software, electronics, mechanics, or more.

Throughout the competition, we had the opportunity to assist numerous teams, and we take great pride in the teamwork and high-quality support our members provided. We are committed to continuing this initiative and helping as many teams as possible in future competitions.





Part III:

# Bnei Akiva



## The Connection with the Bnei Akiva Network

At the end of 2021, we reached out to the largest religious-Zionist educational network in Israel, "The Center for Bnei Akiva Yeshivot and Ulpanot," with the goal of expanding our influence and securing additional resources to achieve our objectives.

We identified a significant opportunity in this collaboration to expose students from religious education to the fascinating world of science and technology, with a focus on establishing new FIRST teams in institutions within the network, which includes over 50,000 students and hundreds of thousands of alumni.

Thanks to this partnership, we established two new FRC teams, with more teams expected to be formed in the future, particularly in peripheral areas. Additionally, we founded seven new FLL teams, and we plan to establish more teams in the coming year.

As part of this collaboration, we are developing a long-term program with the network for the upcoming years, which can be found at the end of the "Bnei Akiva" section.





# Establishment of PORTAL #9303

## Meetings with the Administration

To present to the management of the school in Givat Shmuel the process of establishing the team and the numerous opportunities embedded in an institutional FRC team, we held a series of meetings with the administration. During the meetings, we explained in detail about the FIRST organization, with a particular focus on the FRC program. Following these meetings, we received official approval to establish the team.

## Recruitment Day

In order to recruit suitable members for the team, we held Excaliday, a unique recruitment day at the school. During the day, we visited classrooms, presented videos of robots from previous competitions, and gave a brief explanation about the FRC program. Additionally, we posted flyers throughout the school and invited students to an exposure evening, where they could learn more about the team and its activities.

## Exposure Evening

During the exposure evening, we gave a detailed presentation about FIRST and the FRC program, showcasing examples from different rounds and challenges from previous years. We discussed with the participants the positive impact of joining the team and explained the season structure, the expectations of each team member, the community responsibility of robotics teams, and the significance of being part of the FIRST community. At the end of the evening, a final registration of new members took place.

## General Training

After the final registration of the team members, the new team members participated in a series of four training sessions, each led by a team leader from our group. During the training, the team leaders explained the roles of different teams and taught fundamental concepts relevant to each field. The goal of the training sessions was to provide all team members with a broad understanding of all areas and allow them to make an informed decision on which team they would like to join based on their skills and interests.

## "Team Building" Meeting

During this meeting, the new team members gathered to make important decisions regarding the future of the team. During the meeting, the team name—Portal—was



chosen, teams were divided, and the leadership team was selected. Additionally, the members began forming the team's vision, which would guide its path in the coming years.

### Mentors, Budget, and Workshop

After establishing the team, we assisted in various logistical aspects, including finding an appropriate workshop and recruiting mentors. Currently, the lead mentor of the team is a graduate of our team, who continues to lead and guide its members. Additionally, we supported the team in the fundraising process to ensure a solid foundation for its continued activities.

### Overlap Period and Training

Alongside the logistical support, each team leader from our team mentored the corresponding team leader in the new team. As part of the mentorship, we assisted them in preparing and delivering the training sessions to their team members to ensure a professional and smooth start for every area within the team.

### Support During the Season

Throughout the season, we continued to mentor and support the new team at every step. Our team leaders were available to them on WhatsApp for any questions or consultations, and during competitions, we made sure to be by their side in the pit to provide immediate assistance when needed.

The mentorship continued during the 2024 and 2025 seasons, with our team ensuring availability for any questions, and even physically visiting the team when necessary, especially after District #1, where the team encountered issues with their robot. We remained committed to offering support whenever needed.





## Dominant Partners in the Opening Process of Firefly #9739

The story of Firefly began with an initiative by students from the school to create a robotics team, and we, Team Excalibur, helped them turn this dream into reality

### **Exposure Night**

To assist Firefly in recruiting team members, we invited students to an exposure night where we provided a detailed explanation of FIRST. During the evening, we showcased examples of competitions and challenges from past seasons and explained how being part of the team could positively impact the students. We also discussed the structure of the season, the expectations from team members, the commitment to the FIRST community, and concluded with final registrations for the new members

### **Building the Team" Meeting"**

In this meeting, the team members gathered and made significant decisions. They suggested names for the team and chose the name "Firefly." Team divisions were made, the leading team was selected, and the group began formulating its vision

### **Second Recruitment**

To encourage more students to join, we organized a second recruitment day in collaboration with Teams Elysium #1937 and TRIGON #5990. On this day, we introduced 10th and 11th-grade students to FIRST, presented robots, and invited them to join the Firefly team

### **Mentors, Budget, and Workshop**

After the team's establishment, we supported them with logistical matters, including finding an appropriate workshop space, recruiting mentors, and securing the necessary resources for their ongoing activities

### **Transition and Training Period**

Alongside logistical support, each of our team leaders mentored their corresponding team leader at Firefly. We helped them prepare and deliver training sessions to their team members to ensure a smooth start for each area of responsibility. Our role was to provide both guidance and assistance throughout the learning process.



## FIRST Exposure

To introduce the new members to the broader FIRST community, we invited Firefly to participate in Off-Season competitions, professional conferences, and workshops. During these events, we closely supported the team, explained the dynamics of the competitions and events, and answered all their questions. The aim was to help them connect with the global FIRST community, learn from veteran teams, and gain confidence ahead of their official season.

## Simulated Season Planning

To help Firefly familiarize themselves with the season process and experience robot building, we assisted them in planning and executing a mock season. During this phase, they gained hands-on experience in all stages of the project, with close mentoring from our team. We provided them with our old chassis, which they could use to practice and develop technical skills.

## Team Process Experience

The new team underwent various stages of learning:

- Research and study on robotic systems
- Team member bonding
- Planning the season process

We utilized our experience to guide them in creating an efficient and organized season plan, ensuring they would be able to maximize their FIRST and FRC experience and have a successful season.

## Ongoing Support Throughout the Seasons

Throughout the season, we continued to offer close mentorship and support, ensuring that Firefly had access to the assistance they needed. We helped with equipment loans, robot assistance, strategic training, preparing them for judging sessions, and more, all aimed at ensuring they could tackle any challenge in the best possible way.

Additionally, we made sure they were strategically prepared for the competition. During District #1 in 2024, their strategy team was invited to observe and learn from our strategy, gaining valuable insights to improve their ability to handle the challenges ahead.



By providing comprehensive support and guidance throughout the process, we helped Firefly successfully navigate their first year in FIRST and set them on the path to continued growth and achievement in the future.





## Collaboration with FRC Teams

In recent years, our team has placed significant emphasis on collaboration with other FRC teams, with the goal of developing a stronger community and contributing as much as possible to the FRC world. Over the years, we have participated in several joint projects that deepened our relationships with other teams and expanded the essence of the robotics competition beyond just the technological challenge.

Here are some of the key activities we've carried out:

### **Joint Modeling Course with Elysium #1937:**

In 2024, we hosted a modeling course for elementary school students throughout the city. The course focused on modeling techniques and was open to students of all ages. This initiative allowed us to share our knowledge with the younger generation and help them develop their skills in this field.

### **Photography Training with Evergreen #7112:**

In collaboration with Team Evergreen, we conducted photography training aimed at improving the media team's photography skills. The training focused on capturing our robots and various team activities. This session significantly enhanced our photography abilities and provided us with more professional tools to document events.

### **Establishing New FRC Teams:**

Together with Firefly #9739 and Portal #9303, we are working to establish new teams in the religious school network (Yeshivot and Ulpanot) of Bnei Akiva. This initiative is part of our broader effort to expand the FRC family and offer more students the opportunity to participate in the program.

### **Joint Volunteer Activities:**

We took part in several volunteer activities as part of our collaboration with other teams. One such example is our activity at the PALACE senior housing in Modiin, where we introduced the elderly population of the city to robotics activities and showcased the talents of the youth involved in our teams. Additionally, during the



war projects, we hosted an activity at the guesthouse in Mevasseret, where we presented our robot to families who had been evacuated from their homes, bringing smiles to both the children and their parents.

#### Competition Projects:

We established additional projects aimed at uniting teams across the country and fostering a spirit of brotherhood and collaboration.

**Help for Teams Project:** A special team circulates among the competition teams offering help in various areas.

**Choco Talk:** This project was designed to unite the teams in Israel and bridge the gaps between us.

**The Million Race:** Each team received fun challenges during the competition, which was part of an effort to foster camaraderie and unity among teams.

Through these projects, we not only contributed to the various teams, but we also strengthened our connections with them and played an active role in creating a vibrant and connected community within the FRC world.



## Establishing FLL Teams

As part of our collaboration with the Bnei Akiva school network, we have successfully established four FLL teams over the past two years. A detailed list of the teams we founded can be found in the "Appendices."

### **Role of the Institution Mentor**

For every institution where an FLL team is planned, a designated institution mentor is assigned. The institution mentor guides the school throughout the team establishment process and serves as the primary point of contact between the school and our organization. They are responsible for the necessary training sessions for both the team and its mentors.

### **The Team Establishment Process**

#### **1. Recruiting Institution Mentors:**

The first step is to recruit institution mentors. In a group meeting, the community team explained the institutional mentoring project and offered interested members the opportunity to become mentors themselves.

#### **2. Training Institution Mentors**

To ensure the mentors are well-prepared, they go through a series of training sessions, covering:

- The team establishment process
- The structure of the FLL program
- Key challenges and solutions in guiding new teams

#### **3. Publishing a Call for Participation:**

To identify interested schools, we published a Call for Participation addressed to schools in the Bnei Akiva network. This document provided a brief overview of FLL, explained the plan to establish teams, and outlined how we would fully support schools in the process.

#### **4. Meetings with School Principals**

To provide a more in-depth understanding of the FLL program, we invited school principals to a meeting. At the end of these discussions, school leaders made their final decision on whether to establish an FLL team.

#### **5. Assignment of Institution Mentors:**

Based on various considerations, each institution is assigned a mentor who best fits its needs. Factors such as geographical proximity, availability, prior



experience, and personal preferences are taken into account. Once assigned, the mentor establishes initial contact with the institution's director and begins the mentoring process.

## 6. Initial Mentorship

The institution mentor assists the institution's director in several key aspects:

- Mentor Training: The institution mentor helps train the new team mentor, either through personal training sessions or by enrolling them in the mentor training course.
- Workshop Setup and Equipment Procurement: The institution mentor supports the new mentor in managing the budget and logistics, including finding a suitable workshop space and purchasing necessary equipment.
- Season Registration: The institution mentor guides the institution's director through the team registration process for the upcoming season.

## 7. Season-Long Support

After the team is established, the institution's mentor supports the team throughout the entire season. The mentor is available to assist the team with any questions or issues that arise. Additionally, the mentor maintains constant communication with the team's mentors and is responsible for guiding them and helping resolve any challenges they encounter throughout the season.

### Team Retention

At the end of the season, we sat down with the teams we established, reviewed the year with them, and discussed the upcoming season. As a result, all the teams we founded continued for another year!





Part IV:

# Community Future



## Project Sustainability

**Java Course:** Running for the second year, planned to continue next year.

**Mentoring FLL Teams:** Ongoing since our team was founded, with plans to recruit new mentors and continue support.

**Ba-Ba-Da Volunteering:** Continued collaboration with plans for expansion.

**FIRST Volunteering:** Actively involved in FIRST events, aiming to increase volunteer hours.

**Excaliday Recruitment Event:** Annual tradition, set to continue and improve.

**6th Grade Robotics Exposure:** Yearly robot presentations for prospective students to continue.

**"Sword of Science" Project:** Ongoing WhatsApp updates with scientific facts, continuing beyond the season.

**Media Exposure:** Continued interviews and outreach to news outlets to expand visibility.

**"Choco Talk" Project:** Bridging gaps between teams from different sectors, to be continued at every competition.

**Supporting Other Teams:** Committed to assisting teams in various ways, such as robot manufacturing, shared field setups, and donating robotics kits.



## Bnei Akiva Collaboration – Future Plans

Expanding Partnership: We aim to strengthen and extend our collaboration with the Bnei Akiva network beyond team establishment.

Major Event: A network-wide gathering is planned for later this year, bringing together all FIRST teams in Bnei Akiva. Each FRC team will lead two activities for the FLL teams, fostering unity and support within the network. Scheduled around Purim.

Work Plan: Developing a long-term strategy outlining shared community goals, resources, and budget allocation. This includes:

- Short-term: Annually selecting schools for new teams and defining necessary resources.
- Long-term: A multi-year vision allocating resources for broader STEM growth.

New Teams in Underserved Areas: A key goal is to strengthen STEM education in peripheral communities. Next year, two new FRC teams and multiple FLL teams will be established in these areas.



## Expanding Our Impact

As a religious team, we initially focused on influencing our own community, seeing it as both a mission and a way to break barriers. However, we recognize the importance of broader outreach. In recent years, we've collaborated with different sectors, including the ultra-Orthodox and secular communities, but we believe we can do more.

Next year, we are dedicating our efforts to cross-sector impact, aiming for two key outcomes:

1. **Bridging Divides:** In a challenging time for our nation, we see an opportunity to unite, emphasize our shared humanity, and strengthen our sense of togetherness.
2. **STEM for All:** We believe STEM education benefits everyone, and we want to extend its reach across all communities.

Our goal is to engage with multiple sectors next year, including:

- The ultra-Orthodox community
- The secular community
- The Arab community



Part V:

# Appendices



# Appendix 1: List of Lectures in the Mentor Course

## Cohorts A & B

	Lecture Title	Lecturer
1	Introduction	Yair Korngut, Team Mentor
2	Core Values	
3	Research Process - Part A	
4	Strategy and Robot Design	
5	Research Process - Part B	
6	Building Principles	
7	Programming - Part A	
8	Robot Overview	
9	Advanced Building Principles	
10	Programming - Part B	
11	Competition Preparation	
12	Effective Teamwork	
13	Working with Children	
14	Summary	

## Cohort C

	Lecture Title	lecturer
1	What is FLL and What Does the Mentor Do	Yatab Koreat
2	Strategy and Robot Design	Gil Chen
3	Research Process	Sigal Oziel



<b>4</b>	Core Values	Yatab Koreat
<b>5</b>	Basic Design, Understanding the Work Environment	Alan Green
<b>6</b>	Scheduling, Task Division, and Team Process	Yair Korngut
<b>7</b>	Basic Building Principles and Electronic Components	
<b>8</b>	Programming Principles in SPIKE PRIME	Eyal Arieh
<b>9</b>	Research Process	Hillel Cohen - Team Alumni
<b>10</b>	Working with Children	Yossi Karel
<b>11</b>	Problem Solving and Advanced Programming	Yossi Karel
<b>12</b>	Advanced Building Principles	Idan Shtrek
<b>13</b>	How a Competition is Managed	Yan Biels
<b>14</b>	Using PID in SPIKE PRIME	Eyal Arieh

## Cohort D

	<b>Lecture Name:</b>	<b>Lecturer:</b>
<b>1</b>	Introduction to FLL and the Mentor's Role	Limor Ponimonsky
<b>2</b>	Mentoring and Team Management	Yatab Koreat
<b>3</b>	Working with Children	Yair Korngut
<b>4</b>	FIRST Core Values	Yatab Koreat
<b>5</b>	Innovation Project – Work Methods	Hillel Cohen (Team Alumni)
<b>6</b>	Innovation Project	Sigal Oziel
<b>7</b>	Competitions and How to Prepare	Guy Feldfogel

Cohort D of the course has received official recognition from FIRST, and recordings of the sessions can be found in the resource map of the First Lego League program.



## Appendix 2: List of Institutions and Teams Participating in the Mentor Course

Institution Name	Team Number	Mentor Status
Chalom - Kfar Saba	---	New
Mindtech - Sakhnin	2401	New
Hofim - Modiin	---	New
Harel Middle School - Kfar Saba	---	New
Ziv and Marks High School - Jerusalem	---	New
Leyada High School - Jerusalem	---	Old
---	440	New
Democratic School - Hadera	---	New
Horev Ulpana - Jerusalem	466, 467	Old
Lev HaPardes - Lev HaSharon	---	Old
---	2426	Old
Ilan Ramon - Kfar Saba	---	Old
MOR - Modiin	---	Old
Shelanu - Tel Mond	---	Old
Al-Amariya - Kafr Qassem	---	New
Ironi B - Modiin	---	Old
Gan Raveh - Gan Raveh	---	New
Lev HaKfar - Lev HaSharon	44	New

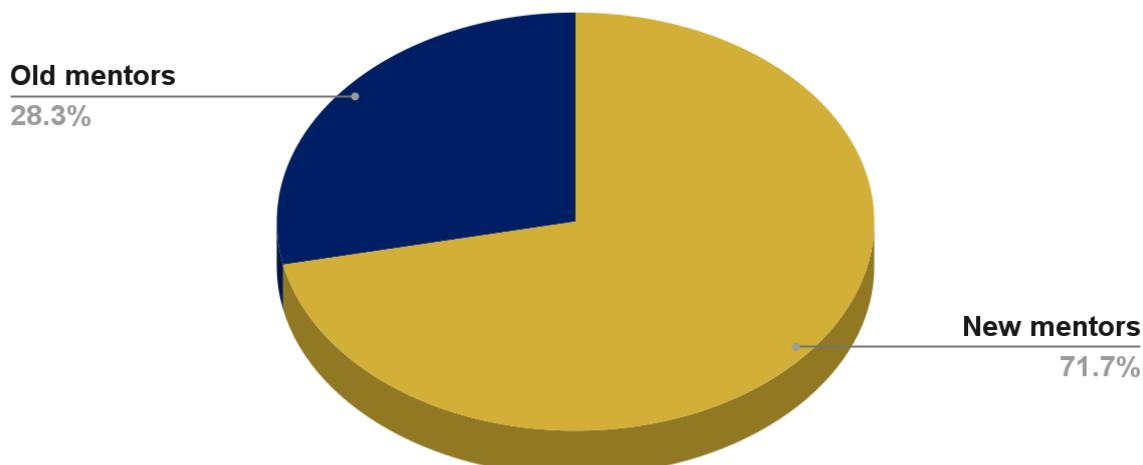


Eshkol Pais - Tamra	1538	Old
Mishoat Neria - Modiin	---	Old
Taha Hussein - Sakhnin	---	Old
Al-Oumariya - Kafr Qassem	---	New
---	1965	Old
Rabin Multidisciplinary - Hadera	---	New
Torah VeAvodah - Kfar Saba	---	New
Leah Goldberg - Netanya	---	Old
Hadash - Tel Aviv	1689	New
Yahalom - Shoham	1818	New
Kiryat Noar - Jerusalem		Old
---	515	New
Tzukim - Shoham	1965	New
Ein Harim - Ein Harim	---	New
YBA Modiin	219	New
YBA Modiin	220	New
YBA Modiin	1972	New
Atid - Kfar Yona	1200	New
Keshet - Shoham	3309	New



## Appendix 3: Distribution of New vs. Veteran Mentors in the Mentor Course

Old mentors VS New mentors





## Appendix 4: Questions in Sword Of Peace



### רשימת השאלות:

- מהו הדבר שאת/ה כי מפחד/ת ממנו במצב הנווכחית, איך אנטיכול/**ה לעזרך לך** להתמודד עם זה?
- מהם הדברים **שהכי חשובים לך במשפחה**, איך נוכל לשמר על יחסים חמים גם בתקופה קשה?
- איזה רגעים חיוביים ומוחדים את/ה זכר **שחוינו יחד כמשפחה**, איך נוכל ליצור עוד רגעים כאלה בזמן זהה?
- איך נוכל לתמוך יחד כמשפחה בחברים ובקהילה שלנו במצב הנווכחית?
- איזה שינויים קטנים נוכל לבצע יחד כמשפחה כדי לשפר את אווירת הבית?
- מהו הדבר שאת/ה כי **מצפה/ה לו ביזור** שיחזור לקדמותו כשהמצב ישתפר?
- מהם 3 הדברים **שמרגשים לך** כי טוב ביום? בוא/י ננסה לעשות אותם יותר ביום הקרים.
- על מה **את/ה כי גאה/ה בעצמך** שעשית בתקופה الأخيرة?
- איזה קשר או תחביב **מיוחד יש לך** שאולי תוכל/י לנצל אותו עכשו כדי לעזרך לעצמך או אחרים להרגיש טוב יותר?
- מה את/ה חשב/ת שיעזר לך להישאר אופטימי/ת ובעל/ת תקווה? **בוא/י נדבר על זה.**

**חשוב לזכור: יש לנו צבא חזק ששומר علينا. אנחנו צריכים לנסות להישאר רגועים ולעוזר איפה שאחננו יכולים. ביחד ובעזרת ה' ננצח! עם ישראל חי!**



## Appendix 5: Competition Project - "The Amazing Race"

1. **Request Electrical Powder** – Ask another team for "electric powder."
2. **Find Two People Named Yoav** – Locate and identify two people named Yoav.
3. **Team Colors Selfie** – Take a selfie with people whose team colors include purple, yellow, orange, and green.
4. **Pre-Match Rituals** – Perform two different team start-up movements before a match.
5. **Team Number Challenge** – Capture images of different numbers from various locations that together form your team number.
6. **FLL Teams Quiz** – Name three FLL teams.
7. **Rock-Paper-Scissors Challenge** – Win a rock-paper-scissors game against an Orbit team member.
8. **Final Task – Morse Code Puzzle** – Watch a provided video of your team's robot and decode the Morse code from its LEDs. Bring the correct translation to the organizer to complete the game.

If you struggle with any task, feel free to ask for help!

### Rules

- Do not disturb other teams.
- Always wear safety goggles while in the pits.
- Do not interfere with other pairs.
- Capture photos of all completed tasks.
- Submit each completed task to receive the next one.
- If a task is too difficult, reach out for assistance.
- The organizer is only one person—please be patient if there is a delay in receiving tasks.
- The winning pair will receive their prize later in the season.



## Appendix 6: Our FLL Awards

Award	Season
Mechanical Design II	City Shaper
Robot Performance I	City Shaper
Research I	City Shaper
Research II	City Shaper
Championship II	City Shaper
Innovation Project III	SuperPowered
Robot Design II	SuperPowered
Innovation Project III	SuperPowered
Programming I	Into orbit
Strategy & Innovation I	Into orbit
Championship I	Into orbit
Strategy & Innovation I	Into orbit
Winning Presentation II	Hydro dynamics
Championship II	Hydro dynamics
Programming II	Hydro dynamics
Strategy & Innovation II	Hydro dynamics
Engineering Excellence Award	Cargo Connect
Core Values I	Masterpiece
Innovation Project I	Submerged
Championship III	Submerged



## Appendix 7: Locations Where We Volunteered with Evacuated Families

Location	Number of Participants
Beit Ha'ara'cha Mechavim (Twice)	30*2
Hanukkah Event in Ra'anana	60
Hanukkah Event for Evacuated Families	40
Sha'arei Jerusalem Hotel	40

## Appendix 8: Learning Pages for the Java Course 2025

**מערכם זו מידים**

מערכם זו מידים הם הדרכ לאותם בחוץ מערך, יותר מפוד אחד של מידע. נבש בלהוח השם:



בלוח השם, אנחנו מכירים את ה"קואדרנטית" בצדדי הלוח. אנחנו יוצרים שיעון לסמן משכרצת C-8H, ניקן פון משכרצת C-1A וגו. כך גבאים גם מיעדים.

בבש בוקן לדוגמא של מינר זו מידם:

```
public class Main {
    public static void main(String[] args) {
        int[][] array = new int[10][10];
        for (int i = 0; i < array.length; i++) {
            for (int j = 0; j < array.length; j++) {
                array[i][j] = 0;
            }
        }
    }
}
```

בשונה מינר גרייל, השם משוכנו פעמים בסוגרים מוגנים, ובום הגדרתו את הגודל של המערך, לדוגמא, עכשו הגדנו מינר ועוד 10X10, כך ששים [10][10].

על מנת לשלת לאו של מינר, יש בשימושו ההפניות הבאות:

```
array[i][j] = 0;
```

כשר זינן הקובאריות של האה או רוצץ לגשת.

באחול של מינר זו מידם, יש צורן בשימוש בלולה מתקוננו, על מנת לנשח אחד מהאינדקסים, נמכן הוא זו מינר. לדוגמא, בילואה האה:

```
for (int i = 0; i < array.length; i++) {
```

**מושג האובייקט**

אובייקט הוא אחד מהיחודות המרכזיות בהכנות וניהול עצמים (Object Oriented Programming) (OO). האובייקט מיצג חפצ בעולם האמיתי או רעיון מסוים.

אובייקט הוא מושע של מולקה (Class). כל אובייקט שנוצר מתוך מולקה מסוימת חוק את אותו מאפייניהם והנהיגיות של האובייקטים האוחרים שנוצרו ממנה. אך לא אובייקט שייצור מ"וזה" מושע למקומות אחרים. כלומר, אם ליצור עייגו-ויסטס טוון והמולקה "מכונית" יוכל לבצע את אותן פעולות כמו יכל להזין בבעב שהוא, אך שרטם ייוו סונג "מכונית" וכך לבצע את אותן פעולות כמו להציג את המטען או בלבולם.

השימוש באובייקטים אפשר ללבנות תוכניות מורכבות ומואנמות יותר. כל אובייקט מקבל את כל המידע והע为民ות ההדרשות לו, מה שמאפשר להסתיר את הפריטים הבלתי חשובים שלו ולהציג מידע מסוים בלבד.

**הסתרת מינר:**אפשרות להסתיר את המחב הפנימי של האובייקט ולהשוו רק את הפונקציונות הדדרות.

**שימוש בוקן:** ניתן לזרום מולקה ולחשהם בתן חדש בספריטים שונים.

**תפקיד קלה:** מולקה לאובייקטים בחרום ובוגרים מקל על התחשזה והסדרה של הוכנה.

**פלורופיזם (Polymorphism):** מאפשר להשתמש בגו-ויסטס מוגנים עםם ביצה אורה.

**הירושה (Inheritance):** אספלהות ליצר מולקה חדש המתבסס על מולקה קיימת, ובכך לשפר ולשדרג את הקוד בזורה-עליה.

**שימוש באובייקטים:** כאשר השתמש באובייקטים בתוכנית שלן, נוכל לחשב עליים כע"ז דרישות עצמאיות שמבצעות פעולות מסוימות או מוחזק מידי טווי. כלומר, אם נבנה מערכת להילוי ספרי, נוכל לזרום אובייקטים מוגנים "ספר", "חבר" ו"מנוי". כל מואובייקט היליל יוכל מידיע וועלות הולגולנים:

- ספר: יוכל לקרוא כמו שם הספר, שם הכותב, ותאריך ה\_Public. והוא יוכל לבצע פעולה כמו השאלת הספר וה呵护ו.
- חבר: יוכל פושט כמו שם הספר, תאריך לידיה, ושם ספר שכתב. והוא יוכל לבצע פעולה כמו הוספה ספר חדש לרשותה של...
- מנוי: יוכל פושט כמו שם המנו, תוגנה, ותאריך ההצטוף. הוא יוכל לבצע פעולה כמו השאלת ספר וחתימת ספר.

הגשה לאובייקטים אלו ופעולותיהם מאפשר לבנות מערכת ניהול ספריה מסודרת, קיירה ווחזקית.

**מושג האובייקט**

אובייקט הוא אחד מהיחודות המרכזיות בהכנות וניהול עצמים (Object Oriented Programming) (OO). האובייקט מיצג חפצ בעולם האמיתי או רעיון מסוים.

אובייקט הוא מושע של מולקה (Class). כל אובייקט שנוצר מתוך מולקה מסוימת חוק את אותו מאפייניהם והנהיגיות של האובייקטים האוחרים שנוצרו ממנה. אך לא אובייקט שייצור מ"וזה" מושע למקומות אחרים. כלומר, אם ליצור עייגו-ויסטס טוון והמולקה "מכונית" יוכל לבצע את אותן פעולות כמו יכל להזין בבעב שהוא, אך שרטם ייוו סונג "מכונית" וכך לבצע את אותן פעולות כמו להציג את המטען או בלבולם.

השימוש באובייקטים אפשר ללבנות תוכניות מורכבות ומואנמות יותר. כל אובייקט מקבל את כל המידע והע为民ות ההדרשות לו, מה שמאפשר להסתיר את הפריטים הבלתי חשובים שלו ולהציג מידע מסוים בלבד.

**הסתרת מינר:**אפשרות להסתיר את המחב הפנימי של האובייקט ולהשוו רק את הפונקציונות הדדרות.

**שימוש בוקן:** ניתן לזרום מולקה ולחשהם בתן חדש בספריטים שונים.

**תפקיד קלה:** מולקה לאובייקטים בחרום ובוגרים מקל על התחשזה והסדרה של הוכנה.

**פלורופיזם (Polymorphism):** מאפשר להשתמש בגו-ויסטס מוגנים עםם ביצה אורה.

**הירושה (Inheritance):** אספלהות ליצר מולקה חדש המתבסס על מולקה קיימת, ובכך לשפר ולשדרג את הקוד בזורה-עליה.

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- ספר: יוכל לקרוא כמו שם הספר, שם הכותב, ותאריך ה\_Public. והוא יוכל לבצע פעולה כמו השאלת הספר וה哿ו.
- חבר: יוכל פושט כמו שם הספר, תאריך לידיה, ושם ספר שכתב. והוא יוכל לבצע פעולה כמו הוספה ספר חדש לרשותה של...
- מנוי: יוכל פושט כמו שם המנו, תוגנה, ותאריך ההצטוף. הוא יוכל לבצע פעולה כמו השאלת ספר וחתימת ספר.

הגשה לאובייקטים אלו ופעולותיהם מאפשר לבנות מערכת ניהול ספריה מסודרת, קיירה ווחזקית.



## Appendix 9: List of FLL Teams We Established

Location of Team Establishment	School Name	Year of Establishment
N'veh Dekalim	Ulpana Lechish	2024
Be'er Sheva	Ohel Shlomo	2025
Hadera	Yeshivat Hadera	2025
Sdeh Ya'akov	Yeshivat Bnei Akiva Sdeh Ya'akov	2025

## Appendix 10: Lesson Summaries for the Python Course

**סוגי מידע**

כפי שציין, מושגנו יוביל לחיות ורבה בדברים. בין הדברים האלה נמצאים טקסט, ספרי, ספרי, ספרי עשרוניים, ערך ביטויי, שימוש ועוד כמה דברים שללדים עליים בהמשך. כל סוג מידע שיוצג באנגלית, בו משחכים כדי ללבונם, תלמידי לבדוק אותו מיעט.

**קסט**

הרך בה נאנו מודעים את המחבב שהוא מתחסן עם טקסט, והוא להקיף אותו ברגשיים. מלבד שמות של שמות, לכטסט יש גורם לאו שמשים nimוט לעשיהו. ניתן להזמין קטעם בפונטיים כollow ו-INITIAL, אך אין אפשרות ללבב ביטויים בסואו טקסט. אם מסטר כל לחיות מוקף ברגשיים, אך יוחשב כתיקסט ולא כטסט. כמו כן, ניתן לשולטט בקד או צ.א.ט.

**דוגמאות:**

```
Python
my_name = "Yonatan"
```

**מספרים**

מספרים הם יוצרים מtekst, ולא צריכים יי'וח' מיוחד כדי שהמחבב יזהה אותם. רוגדרה שלם גם לא סמכני, אך יש לשים לב לבודל בין מספרים עשרוניים לבין מספרים שלמים.

**דוגמאות:**

```
Python
my_age = 12
my_age_exactly = 12.5
```

**בוליאן**

בוליאן או ערך ביטאי, כלומר שלו ורך שמי אופציית - נכון או לא נכון. הוא נכתב בקוד C - True (כן), או False (לא כן). אCMDם הוא טקסט, אך אל קומיס ערך בילאי ברגשיים. בוגרי, יש לשים לב לכך שגם את הערך הראשון **אמת** גדולתו, כייגן של בילאים בקוד הוא **טוף**.

**דוגמאות:**

```
Python
i_like_python = True
```

**סיכום שיעור #2**

הגושאים שנלמדו בשיעורים ואחריהם הם:

- ← שנותנים
- ← גוֹן מיצ'
- ← טעלה ממחמיות
- ← פעולות טקסט
- ← מעגל וריאנט
- ← קלט

**משתנים**

משתנים הם הדרך בה המחשב שומר ("זוכר") מידע. אותו מידע יכול להיות מספר, טקסט, רשומות ואפל שום דבר. הגדרה ממשתנים כולל שלושה מרכיבים: שם המשנה, טיפן ה- =, וערך המשנה. כדי לשם בינהם חוו, כדי שקווק זיהה מוכן.

**דוגמאות:**

```
Python
my_age = 12
```

כל משנה יש שם, וזה גבלות מסוימות למה אותו שם יכול להיות:

שם של משנה לא יכול להתחיל במספר ← שם של משנה חייב להיות מוכן במספרים ואופיות באנגלית (Z - A) ← אם שם משנה יהיה יותר מילה אחת, אי אפשר לשלש ווחות בין המילים ← היחסות במבנה תחומר זכר ליפופידן \_בנ\_תכלים ← ניתן לחשוף אופיות דלותה בכל שיב בפעם, אך על הקפיד לרשום את שם המשנה והדוק במקומות חdziים בקד ← מרגע הגדרת המשנה, הערך שלו משתנה אליו. ככל מקום, כל מקום שם משנה חולץ - הערך שלו בא אין.

