

# PACK OF PARTS

## Eastlake Robotics

*FIRST ROBOTICS COMPETITION TEAM1294.org*

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**2023-2024 MEMBER HANDBOOK**

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# THE TEAM

## INTRODUCTION

FRC Team 1294 Pack of Parts, formerly known as Top Gun, began in 2004. Over the past 19 years, Pack of Parts (POP) has grown to be a large team of 90+ members annually, with a diverse group of dedicated students from the Sammamish area. Based out of Eastlake High School, POP's members are high school (9-12) students from Eastlake High School, Redmond High School, Tesla STEM High School, International Community School, and homeschool.



**2022-23 Team Photo (with the Engineering Inspiration Award)**

## MISSION STATEMENT

Our mission is to inspire young people to be science and technology leaders, by engaging them in exciting hands-on programs that build science, engineering and technology skills, and inspire innovation, to foster well-rounded life capabilities including self-confidence, communication, and leadership.



**2022-23 Season Robot (Riptide)**

# ABOUT FIRST

## WHAT IS FIRST?

FIRST (For Inspiration and Recognition of Science and Technology) is an international youth organization that operates the [FIRST Robotics Competition](#), [FIRST Tech Challenge](#), [FIRST LEGO League](#), [FIRST Lego League Jr.](#), and [FIRST LEGO League Jr. Discovery Edition](#) competitions. FIRST was founded by inventor Dean Kamen and former MIT professor Woodie Flowers in 1989 to inspire young people's interest and participation in science and technology. FIRST is "More Than Robots". FIRST participation is proven to encourage students to pursue education and careers in STEM-related fields, inspire them to become leaders and innovators, and enhance their work and life skills.

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## WHAT IS FRC?

Combining the excitement of sport with the rigors of science and technology, we call the FIRST Robotics Competition the ultimate *Sport for the Mind*. Under strict rules, limited resources, and an intense six-week time limit, teams of students are challenged to raise funds, design a team "brand," hone teamwork skills, and build & program industrial-size robots to play a difficult field game against like-minded competitors. It's as close to real-world engineering as a student can get. Volunteer professional mentors lend their time and talents to guide each team. Each season ends with an exciting FIRST Championship in Houston, TX

## **VALUES OF FIRST**

### **Gracious Professionalism**

Dr. Woodie Flowers (1943 - 2019), former MIT Professor and FIRST National Advisor, coined the term "Gracious Professionalism". Gracious Professionalism is part of the ethos of FIRST. It is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. With Gracious Professionalism, fierce competition and mutual gain are not separate notions. Gracious Professionals learn and compete passionately, but treat one another with respect and kindness in the process. Knowledge, competition, and empathy are comfortably blended. In the long run, Gracious Professionalism is part of pursuing a meaningful life. One can add to society and enjoy the satisfaction of knowing one has acted with integrity and sensitivity.

### **Coopertition**

Coopertition produces innovation and puts the cooperation in competition. In FIRST, Coopertition is displaying kindness and respect in the face of fierce competition. Coopertition is founded on the concept and a philosophy that teams can and should help and cooperate with each other even as they compete. Coopertition involves learning from teammates. It is teaching teammates. It is learning from mentors. Coopertition means striving for success, but assisting and enabling others in the process.

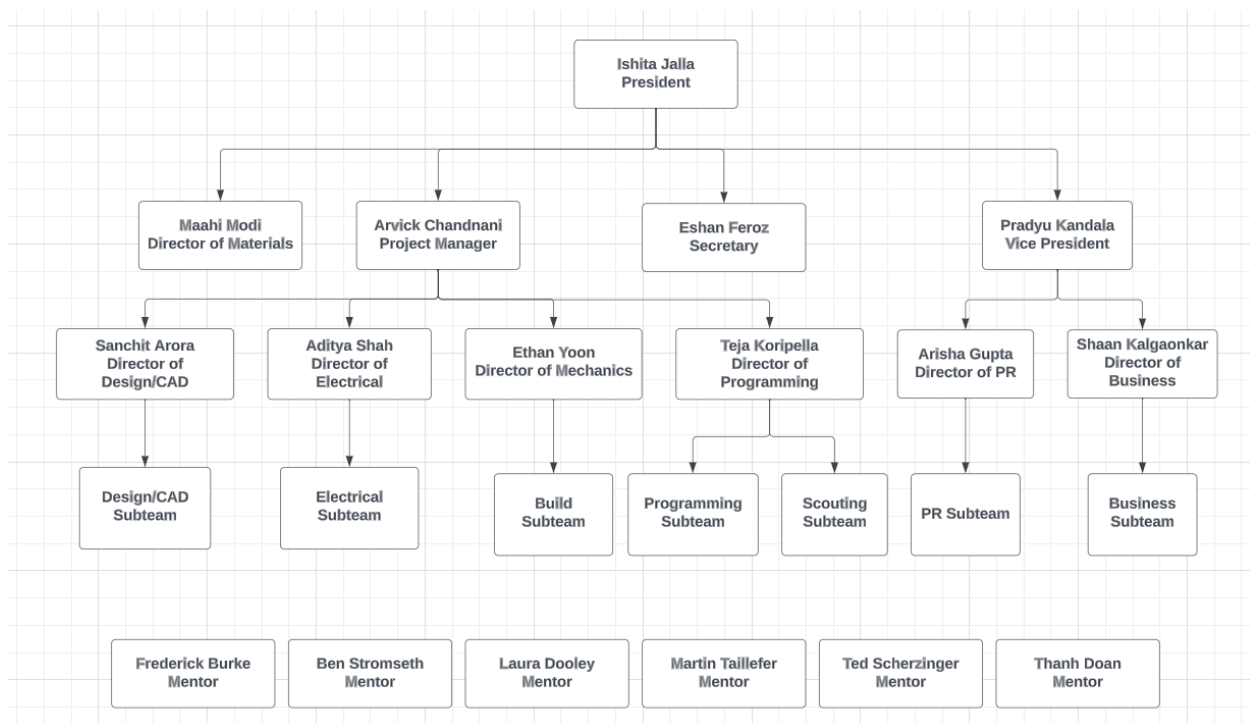
# TEAM ORGANIZATION

## MENTORS

Pack of Parts Robotics would not be complete without the help of our mentors, advisors, and parent volunteers. Mentors help manage both the digital spaces of [Slack](#), [GitHub](#), Email, and Google Drive along with physical spaces at Eastlake High School.

## STUDENT LEADERSHIP

Here at Pack of Parts, we believe in the power of student leadership and involvement. Hence, POP is a student-run club with a variety of opportunities for youth leadership. We are here to teach what we know and uncover breakthroughs together.



The Student Board consists of an Executive Board and a Project Management Board. Following the end of each season, a new *President*, and *Vice President* are elected via a team-wide voting process. The remaining positions are selected by the graduating senior board members and mentors via an application-based interview.

## SUBTEAMS

Team members take on an active role on one or more of POP's subteams. Each director leads their corresponding subteam and is aided by at least one subteam lead, both selected via an interview process.

**CAD/Design/Fabrication** - Focused on computer designing and manufacturing of the robot using CAD and CAM software

**Mechanical** - Focused on hardware: design (works with CAD subteam), prototyping, machining, and assembly (works closely with CAD)

**Programming** - Responsible for movement of the robot via remote control and autonomous instruction

**Electrical** - Responsible for all things routing, pneumatics, and electronics on the robot

**PR/Business** - Guides the team's business, outreach, and media presence

## COMPETITION ROLES

In addition to club leadership positions during build season, team members may have a competition role. Standard competition roles are:

**Drive Team** consisting of a *Driver*, *Operator*, *Drive Coach*, *Human Player*, and *Technician(s)*. The Drive Team is selected via interviews and tryouts during the preseason. The Drive Team is responsible for representing the team during competitions by driving the robot during matches.

**Pit Crew** consisting of a *Safety Captain* and *Pit Manager(s)*. Safety Captain, part of the Project Management Board, is selected by the Manager of Materials during pre/build season. Pit Manager(s) are

responsible for the organization and accessibility of the team's competition pit, are appointed during build season and work directly with the Manager of Materials.

**Scouting** consists of a *Scouting/Strategy Lead*, selected via application-based interview during pre-season, part of the Project Management Board; and *Scouts*, team members tasked with observing matches and recording data and observations about the performance of teams. Team members without a main competition role will become Scouters or assist the Scouting/Strategy Lead during competition.

**PR** members are responsible for taking photos and videos of the team to use for the purpose of media posts, recap videos, and general publications.



# SEASON LAYOUT

## PRESEASON

September -	Interest meetings and welcome new members Subteam introductions Parent Meeting for October Competition New member training
October -	Drive Team Tryouts Offseason competitions Safety Training begins Begin pre-season project(s) within subteams New member training
November -	Parent Meeting for March/April Competition
December -	Pre-season project(s) finished Prepare for upcoming build season

## BUILD SEASON

December-	Pre-kickoff planning meeting
January-	Season Kickoff & Build Season begins Meeting schedule shifts to 4 days a week <ul style="list-style-type: none"><li>● Tuesday 3:20-6</li><li>● Wednesday 6-9</li><li>● Friday 3:20-6</li><li>● Saturday 10-4</li></ul>
February -	Build (officially) season comes to an end Robot Reveal Remaining competition roles selected Competition preparations

## COMPETITION SEASON

March - First and second competitions are determined in season

April - First and second competitions are determined in season

PNW District Championship (qualifying teams)

FIRST World Championship (qualifying teams)

## POST-SEASON

May - New board is elected/interviewed

June - End of Year Banquet

July - Offseason summer projects Including camp

August - Offseason summer projects including camp

## TEAM COMMUNICATION

### STUDENT COMMUNICATION

Our team's primary forms of communication are through Slack, GitHub, the Website, and Email. All members are expected to frequently check for important updates and announcements on these platforms, and important dates on the team website.

For board management, we use a shared **Google drive** and docs to document our meetings and progress as well as future plans.

[Slack](#) is used for announcements and intrateam communication. This is the most important communication platform for those associated with the team. Members/Mentors are expected to check this daily.

[GitHub](#) is used as a project management platform and programming repository. Every team member is expected to be on GitHub and part of our organization. GitHub is where each sub team documents projects

and progress on those projects. It's also used to assign specific tasks to members. Directors/board members/mentors have the ability to open/close issues and assign projects to specific team members.

**Social media (Instagram and Facebook)** is used as an outreach platform and for aesthetics and team branding. DO NOT USE SOCIAL MEDIA AS SOURCE OF TEAM INFORMATION.

[Team 1294 website](#) is where important documents (handbook, safety manual, STIMS) are found, along with our calendar of events.

Other good sources for all things FRC include:

[Chief Delphi](#) [FIRST Washington](#) [FIRST | For Inspiration and Recognition of Science and Technology](#)

## **PARENT/GUARDIAN COMMUNICATION**

Information to families is sent via email and text message. We ask that each student provides at least one parent/guardian email and phone number on all forms/other materials distributed to families in preparation for the season.

For updates on our club check out website [team1294.org](http://team1294.org), ask members, ask a mentor, or check social media. Email is our primary method of communication. Text messaging is used for planning, when immediate contact is required, and on team trips.

# MEETING ATTENDANCE

**As with any team, you are expected to attend most events on our shared calendar. We know life sometimes gets in the way and ask that you be proactive in communication if you know you will be absent, or cannot fulfill a duty.**

## GENERAL ATTENDANCE POLICY

Attendance and participation will be taken at every team meeting. We understand that students have other commitments and are willing to work around excused absences, however, **members must attend at least 65% of ALL preseason and build season meetings** to be able to attend competitions with the team. Attendance will be tracked with a QR code during the last hour of the meeting.

If you are going to be absent: please @ your sub team director in the [attendance](#) channel on Slack. This should be sent as soon as possible.

If a director or mentor is going to be absent please coordinate with other members and ensure your subteam will be successful without you.

## ATTENDANCE - Build Season

Any student with less than 65% attendance of scheduled meetings or will be communicated with so we can understand the situation. When in attendance all members are expected to be actively engaged.

We take safety in our shop very seriously. If a member is repeatedly asked to put on safety glasses, they may be marked absent for that meeting.

Attendance through preseason and build season impacts your participation in our clubs competitions/activities. Mentors have the right to revoke or limit a student's attendance at competitions/activities.

# RULES AND EXPECTATIONS

## GENERAL CODE OF CONDUCT

1. Students must demonstrate Gracious Professionalism, Coopertition, and teamwork at all times.
2. Students must proactively contribute to team activities and projects.
3. Students must interact respectfully and professionally with adult mentors, advisors, and parent volunteers.
4. Horseplay, harassment, and violence of any kind are not tolerated at meetings, competitions, or any club-sponsored activity.
5. Students with questions, comments, or concerns should contact a student Board member and/or mentor.
6. Violations of the code of conduct, bylaws, and/or shop rules will result in: warnings, suspension from shop, demotion from a leadership position, suspension from the team
7. Food is to be eaten and kept in designated areas.

## SHOP RULES

1. All students must successfully complete preseason Safety Training
  - a. Must score 100% on written safety test
  - b. Must successfully complete mentor-led shop test
2. All students must follow the safety procedures listed in the Safety Training manual at all times.
3. All students must wear safety glasses at all times
4. All students must ask for help and/or supervision when operating power tools and not distract others as they do so.
5. All students must **clean up their workspaces before they leave - leave them in a better condition than when started!**

## COMPETITION EXPECTATIONS

1. To attend competitions, students must complete and turn in all required forms, registration, and club dues by the stated deadline as well as have the required attendance.
2. Members with a competition role will be required to attend both district competitions and possibly a District Championship and/or World Championship (based on advancement).
3. Team members with one of the following roles will be expected to assist in pit setup the Friday before each competition: *Driver, Operator, Drive Coach, Human Player, Technician, Safety Captain, Pit Manager(s)*
4. Team members without a defined competition role will be expected to fulfill the role of *Scout* and remain in the stands to cheer on POP's drive team as well as other teams on the field.
  - a. Prior to match scouting, scouts will explore the competition pits and learn more about the capabilities of other teams (pit scouting).
  - b. Scouts will then work match scouting shifts as specified by the *Scouting/Strategy Lead*.
5. *Safety Captain*, as well as other team members in the competition pits, will present the team's work in various technical and non-technical areas to judges.
6. Team members will wear their team shirts/hoodies and any additional team spirit gear during competition.
7. All team members will be expected to assist event volunteers and other teams whenever possible.
8. Team members, mentors, and families will be expected to demonstrate unparalleled Gracious Professionalism and cooperation at all times during competition. Any behavior deemed "un-GP" will not be tolerated.

# EVENT DESCRIPTIONS

## COMPETITIONS

Fall events - Every fall there are many competitions for our team to choose from. The same game rules and field are used as in the previous year's game.

District Events - Every FIRST team will compete in two weekend-long district events in March and April. District events will take place on a Saturday and Sunday with a pit setup on Friday evening. Only members with a competition role will attend the Friday pit setup.

District Championships (qualifying teams) - Following the district events is an exciting district championship, pulling 50 of the best PNW teams together in a location varying each year. The PNW District Championship is a multi-day event and involves an overnight stay and possibly one or two missed school days. If Pack of Parts qualifies for this event, more details involving transportation and housing will be released during the season.

World Championship (qualifying teams) - In mid-April, the FIRST World Championship will take place in Houston, TX. Qualifying teams from district events across the world will compete in a week-long event with hundreds of international teams. In addition to showcasing their work on the field, teams have a chance to participate in exciting museum tours, attend a high-energy welcome party, and explore the city of Houston. If Pack of Parts qualifies for this event, more details involving transportation and housing will be released during the season.

# MEMBER REQUIREMENTS

Being a member of Pack of Parts Robotics means being a member of a competitive team. All members are expected to follow the Team 1294 Constitution, Code of Conduct and subsequent By Laws at all times. These documents are always available for viewing and can be accessed via the team website.

In order to be a full member of Pack of Parts Robotics, a student must meet all the following requirements. There will be periodic scheduled checkpoints to ensure all students are on track to complete all requirements by the end of the season.

1. All paperwork, permission slips and STIMS must be completed and turned in on time. These forms are always available on the team website
2. \$100 club fee must be paid on time. This club fee goes towards transportation to and from competitions, competition registration, and season materials. If this fee makes it difficult for a student to become a member of the team, contact [packofparts1294@gmail.com](mailto:packofparts1294@gmail.com)
3. Additional fees will/may be needed to attend District Championships and Worlds depending on sponsorship. Financial aid is available for this as well.
4. All students must complete Safety Training. Preseason Safety Training will involve a written and hands-on "test". Students who do not go through this process will not be allowed to work in the shop.
5. Commitment to attend 65% of all scheduled meetings. We understand that students have other commitments and are willing to work around excused absences. That being said, we value



quality over quantity individual work, and encourage everyone to attend as many meetings as possible.

6. Demonstrate Gracious Professionalism\* consistently. Any behavior deemed un-graciously-professional will result in warnings, mentor involvement, limited privileges and shop rights, expulsion from a leadership position, or even expulsion from the team.

\*See page 5

7. As part of Pack of Parts, members will be photographed for promotion team videos, FIRST related media and/or team social media accounts. If you wish to refrain from being photographed contact and being used in promotional materials contact [packofparts1294@gmail.com](mailto:packofparts1294@gmail.com)

# FAMILY INVOLVEMENT

## FOOD SUPPORT

Meetings - Saturdays: During build season, we may rely on parent involvement in supplying lunches for our day-long weekend meetings. Signups for bringing in food will be sent out periodically to prepare for build and competition season.

Weekdays (Tuesdays, Wednesdays, Fridays)- parents and students will be asked to provide snacks periodically throughout the year.

Competitions - Parents will be asked to donate catered lunches or the team will be able to purchase.

## VOLUNTEERING AND MENTORSHIP

Volunteering with FIRST - Volunteering at FIRST events is encouraged for both students and their parents/guardians. Additionally, *parents/guardians interested in mentoring or volunteering directly with our team may be eligible to earn matching donations through their company for Pack of Parts Robotics.* We encourage parents/guardians to check if their company matches donations here: <https://www.firstinspires.org/ways-to-help/corporate-matching-gifts>

Mentoring with Pack of Parts - If you are a parent/guardian with technical and/or nontechnical expertise interested in becoming a mentor for FRC 1294 Pack of Parts, please reach out to us at [packofparts1294@gmail.com](mailto:packofparts1294@gmail.com). We are excited to have you on our team! Be a volunteer with LWSD and be one of parent leaders who can chaperone and drive students to events! Reach out to [fburke@lwsd.org](mailto:fburke@lwsd.org) for more information.

## GENERAL SUPPORT OPPORTUNITIES

Transportation (offseason & outreach events) - Interested and available parents/guardians will be asked to provide group and individual transportation for students to and from outreach, volunteer, fundraising, and offseason events. These may be day-long or weekend-long and will be held in various locations.

Supporting the team - Whether it's by bringing food to meetings and events, mentoring, offering to carpool, or even attending fundraisers, we are extremely thankful for the support of our parent volunteers. Supporting the team at offseason, outreach, fundraising, and competition events is always encouraged and greatly appreciated, as well. As our students spread the word of FIRST and POP's journey in their communities, we ask the same of student families.

From parent interested to fully onboarded mentor workflow:

Interested	Reach out to mentor/board member	Attend a meeting	Find a project	Consistent and reliable attendance	Fully capable to mentor team projects
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# FINANCES

If any fees or dues make it difficult for a student to become a member of the team, they are encouraged to reach out to Mr. Burke, our faculty advisor, at [fburke@lwsd.org](mailto:fburke@lwsd.org) or [packofparts@gmail.com](mailto:packofparts@gmail.com).

## **DUES AND FEES**

Club fee - \$100

This club fee goes towards robotic components, fees for competitions, and registrations.

If you are a student at Eastlake HS, you can pay at the school bookkeeper or online. If you are a student elsewhere, please write a check to Eastlake Robotics Boosters and deliver it to the team Director of Finance.

## **TEAM MERCHANDISE**

Merchandise will be available for sale in the early fall and again during build season. This is to ensure our team maintains a professional, identifiable, and uniform image at competitions and events.

## **TRAVEL EXPENSES**

In the possibility that our team advances to the PNW District Championship and/or World Championship in Houston, additional travel expenses will be imposed. These fees will cover transportation, overnight housing, and food arrangements for each student. More information on these expenses will be communicated during the competition season.

# PARENT/GUARDIAN SUMMARY SHEET

Summary of important information for parents/guardians: please read the following section fully.

## COMMUNICATION

- Students will communicate with the team via Slack, GitHub, and Email
- Family communication will take place via emails, text messaging, and parent meetings. We ask all members to provide a frequently checked student and parent email.

## MEMBER REQUIREMENTS

- All paperwork, permission slips and STIMS must be completed and turned in on time.
- \$100 club fee must be paid on time.
- All students must complete Safety Training.
- Commitment to attend 80% of all scheduled meetings.
- Demonstrate Gracious Professionalism consistently.
- Violations to the team Code of Conduct, Shop Rules, and/or Competition Expectations will result in 1) a warning, 2) mentor involvement, 3) limited privileges and shop rights, 4) expulsion from a leadership position, and 5) expulsion from the team.

## FAMILY INVOLVEMENT

### FOOD SUPPORT

- Signups to provide food and team meals for extended meetings
- Contribute food items for competitions
- Not required, but highly encouraged

### VOLUNTEERING AND MENTORSHIP

- Volunteering through FIRST for events ([firstinspires.org/volunteer](http://firstinspires.org/volunteer))

- Mentoring/Volunteering with Pack of Parts
- Matching donations through your company (check with your employer's HR department for a matching program)
- Not required, but highly encouraged

### **GENERAL SUPPORT OPPORTUNITIES**

- Transportation to/from offseason, outreach, volunteering, and fundraising events
- Supporting the team at events (competitions and other)
- Publicizing and sharing team-run events and initiatives
- Highly encouraged of all families

### **FINANCES**

- \$100 club fee required of each student to be granted membership (covers season registration, materials, and competition transportation)
- Additional dues required per student for team merchandise
- Additional travel expenses if team qualifies for future competitions
- If any of these dues make it difficult for your student to join Pack of Parts, please reach out to [fburke@lwsd.org](mailto:fburke@lwsd.org)

# 2023-2024 STUDENT CONTRACT

**STUDENTS: by signing below, I agree to all of the following:**

- I have read and understood the 2023-2024 Member Handbook in full.
- I commit to attending a minimum of 65% of team meetings.
- I understand and agree to all member requirements.
- I understand my responsibility to check Slack regularly for team communication.
- I understand my responsibility to check GitHub regularly for team projects and assignments.
- I understand and have familiarized myself with the values, mission, components, and impacts of FIRST Robotics.
- I will behave in a responsible, mature, safe, and Graciously Professional manner at all times when representing the team (this includes in person and online presence).
- If I have any questions, comments, or concerns, I will bring them to the Board or mentors / advisors, to be addressed.

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Student Name (Print)

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Student Signature

Date

**PARENTS/GUARDIANS: by signing below, I agree to all of the following:**

- I have read and understood the 2023-2024 Member Handbook.
- I understand and agree to all financial and family support obligations detailed in the Handbook. If these obligations make it a challenge for my student to participate on Team 1294, I will reach out to a team advisor.
- I understand that my student has committed to attend approximately 65% of team meetings and check Slack regularly for team communication.
- I understand it is my responsibility to provide a frequently checked email to the team for the purpose of family communication.
- I understand that my student is expected to behave in a responsible, mature, safe, and Graciously Professional manner at all times.
- I will demonstrate Gracious Professionalism when representing the team (this includes in person and online presence, as a participant or spectator).
- If I have any questions, comments, or concerns, I will reach out to the Student Board and/or mentors/advisors.

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Parent Name (Print)

Parent Email

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Parent/Guardian Signature

Date