FIRST Team 1511
Rolling Thunder
Member Handbook
2014 - 2015

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FIRST Robotics Team 1511 in one page or less!

What do we do? We design and build a really cool robot, and compete against other robots in a game that's different each year! But it's more than just building a robot – our team operates like a small business and feels like a family. We have different "subteam" groups that handle everything from marketing and fundraising to website design and electrical work. Even if you have no idea how to hold a wrench, there's something for you here, and we'll teach you how!

Why? Because it's FUN! *FIRST* is all about having fun while learning, and so are we! Along the way, you can learn technical skills from mechanical and electrical work and computer programming, but you'll also learn about teamwork, leadership, respect, and integrity.

What are the basics? Team 1511 works with engineering and business mentors (most of them from our main sponsor, Harris Corporation). During the fall, we have "subteams" that learn about specific things we'll need when it comes to building the robot and running the team. In early January we learn what this year's game will be, and from then through mid-February we design and build our robot! During March and April, we travel to competitions and have a great time meeting other teams, checking out all the different robots that have been built, and of course cheering for our robot. Once the competition season is done we do fun events over the summer, and plan for the next year.

What do team members do? Participate - your participation (see Achievements on page) determines whether or not the team will pay for you to travel to the competitions, where the big excitement is! But don't worry if your schedule doesn't allow a huge time commitment. You can be on the team to whatever degree your schedule allows – the only difference is that you may need to contribute to the travel costs if you go to the competitions. (As with any school team, you'll need to keep your grades up and behave appropriately.)

When do we meet? We meet EVERY Tuesday from 6pm to 8pm, all year round, at Penfield High School. We do NOT meet during winter break or when school is cancelled (i.e. due to weather). Meetings are open to students, parents, and other interested, potential members.

What's in it for you? Besides building a really cool robot, you mean? How about hands-on learning from people who do real-life engineering and business management every day? Or great experiences with a team of fun students? Or lots of college scholarship opportunities? Over **$16 million** of scholarship money is available to students who participate in *FIRST* robotics during high school! It looks great on your college application, too – and your mentors can write recommendation letters and be job references for you!

Where can I find more info? On the web, our team's website is www.penfieldrobotics.com, with forums at www.penfieldrobotics.com/forum. You can get information on the *FIRST* organization at www.usfirst.org. More information (and useful forums) are at www.chiefdelphi.com.

Welcome to Robotics!!!

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1. INTRODUCTION

Welcome to *FIRST* (For Inspiration and Recognition of Science and Technology), the world's pre-eminent robotics competition for high school students. The message of *FIRST* is to inspire young people, their schools, and communities with an appreciation of science and technology. You'll learn to perform high quality, well-informed work while learning and competing intensely, but treating one another with respect and kindness in the process – this is called "Gracious Professionalism." As a member of the *FIRST* family, you will enjoy the satisfaction of knowing that you have acted with integrity and empathy. *FIRST* is not just about robots; it's about ideas and people, too.

***FIRST* Origins**
FIRST was started by inventor Dean Kamen, who saw a culture based solely around athletics and celebrity gossip. Kamen realized that there is more need for people in science and technology careers than there are sports and entertainment. He partnered with Woodie Flowers, an MIT professor, to create *FIRST*.

***FIRST* Robotics Competition (FRC)**
The *FIRST* Robotics Competition is an exciting, international competition that teams professionals and young people to solve an engineering design problem in an intense and competitive way. The program is a life-changing, career-molding experience—and a lot of fun! The competitions are high-tech spectator sporting events, the result of a lot of focused brainstorming, real-world teamwork, dedicated mentoring, project timelines and deadlines. There is more to FRC than building a robot. It's a complex exercise in project management, which entails a lot of work that doesn't require a technical background.

***FIRST* redefines "Winning."** Teams are rewarded for excellence in design, demonstrated team spirit, gracious professionalism, maturity, and ability to overcome obstacles. Scoring the most points is a secondary goal. "Winning" means learning, being inspired, and building partnerships that last.

Rolling Thunder is *FIRST* Robotics Team 1511, of **Penfield High School** in Penfield, New York. It was founded in the spring of 2004 through a partnership with **Harris Corporation**. Harris RF Communications Division (RFCD), located in Rochester NY, is a leading supplier of secure voice and data communications products, systems and networks to military, government, and commercial organizations worldwide.

1.1. Mission

Team 1511 Mission Statement - **"Inspiring students to become leaders through engineering and the fun of *FIRST* robotics."**

Team 1511 Goals:

- To develop **leadership** within all of our students.
- To focus on promoting ***FIRST* Lego League** in middle school aged students around Rochester.
- To involve our team in the **community**, promote a sense of responsibility in our team members, and reach out through our 1511 Thunderbolts Goal.
- To focus on **organization and communication** to make our team more efficient and effective.
- To promote **education** through the Penfield School system and through our team. Schoolwork is a priority and we will help every student succeed, in addition to providing them with education on robotics, science and technology.
- To put focus on the **Engineering Design Process**, and develop our team and build season around this process.
- To promote **student growth**, the growth of the team, and to build the sense of family and morale within our team.
- **Raise funds** to support our team and keep it self-sustained for many years to come. Funds also support our *FIRST* LEGO League (FLL) and Junior *FIRST* LEGO League) Jr. FLL initiatives.
- To have **LOTS OF FUN!** Our team is a family of friends and we all love to have fun together.

1.2. History / Awards

Team 1511 started in February of 2004 with a small core team of two parents, teacher Linda Sterber (PHS Technology Teacher), and *FIRST* alum/mentor, Kim O'Toole Eckhardt. The group laid the groundwork for the foundation of the team in the fall of 2004 with the new student class. Each year since, the team has recruited a strong freshman class, and several mentors from Harris and the community. In 2009, Larry Lewis (Harris RF Corporation) became the team leader and has continued on Team 1511's traditions.

The team is proud of the variety of awards it has received as it shows the strength and well-roundedness of the team. Our three highest awards are the Regional Chairman's, Rookie All Star, and Engineering Inspiration awards.

Chairman's: *FIRST*'s most prestigious award, it honors the team that best represents a model for other teams to emulate and best embodies the purpose and goals of *FIRST*. The award helps keep the central focus of the *FIRST* Robotics Competition on the goal of inspiring greater levels of respect and honor for science and technology.

Engineering Inspiration: Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school and community. This is the second-highest award a team can garner.

Rookie All Star: Celebrates the rookie team exemplifying a young but strong partnership effort, as well as implementing the mission of *FIRST* to inspire students to learn more about science and technology.

Each year, the team has competed in various Regional events plus the Championship event. The awards won each year are listed below.

2014 Awards

New York Tech Valley Regional	Troy, NY	Engineering Inspiration
Finger Lakes Regional	Rochester, NY	Chairman's Award

2013 Awards

Finger Lakes Regional	Rochester, NY	Gracious Professionalism Award Woodie Flowers Award – Larry Lewis Dean's List Finalist – Ciana Robertson
Boston Regional	Boston, MA	Gracious Professionalism Award Safety Award Regional Winner

2012 Awards

Finger Lakes Regional	Rochester, NY	Innovation in Controls Woodie Flowers Award – Jeff Downs Volunteer of the Year – Larry Lewis Dean's List Finalist – Justin Byers
Northeast Utilities Regional	Hartford, CT	Engineering Inspiration

2011 Awards

Finger Lakes Regional	Rochester, NY	Gracious Professionalism Award Dean's List Finalist – Jason Kuberka
Washington DC Regional	Washington DC	Chairman's Award

2010 Awards

Finger Lakes Regional	Rochester, NY	Engineering Inspiration Chairman's Award
Boston Regional	Boston, MA	Regional Finalist (2nd Place) Coopertition Award Dean's List Finalist – Crystal Vongnaphone

2009 Awards

Finger Lakes Regional	Rochester, NY	Entrepreneurship Award
		Regional Finalist (2nd Place)
Chesapeake Regional	Annapolis, MD	Chairman's Award
		Imagery Award
		Website Award
Championships	Atlanta, GA	Judge's Award

2008 Awards

Finger Lakes Regional	Rochester, NY	Engineering Inspiration
Philadelphia Regional	Philadelphia, PA	Imagery Award
		UL Industrial Safety Award

2007 Awards

Finger Lakes Regional	Rochester, NY	Chairman's Award
Boston Regional	Boston, MA	Team Spirit Award
		Website Award

2006 Awards

Finger Lakes Regional	Rochester, NY	Engineering Inspiration
Boston Regional	Boston, MA	Imagery Award

2005 Awards

Finger Lakes Regional	Rochester, NY	Rookie All-Star Award
Buckeye Regional	Cleveland, OH	Highest Rookie Seed
Toronto Regional	Toronto, ON	Rookie Inspiration
		Team Spirit Award
		Regional Winner
Championships	Atlanta, GA	Championship Rookie All-Star

While the awards are amazing, the real success is the number of students we have inspired in science and technology. Many of our graduating seniors have gone into fields related to science, technology or business, and a growing number of team alumni stay involved with the team in some way.

2. BASIC CALENDAR/ SCHEDULE

The **Team Calendar** is officially hosted on the team forums (www.penfieldrobotics.com/forum) – this is the most accurate and up-to-date listing of team activities.

The Robotics Team meets year-round with varying levels of involvement by the "seasons," defined as preseason, build, competition, and summer. Throughout the seasons, there will be events such as community service participation, demonstrations, and fundraising. Students are encouraged to be involved in all seasons to optimize their experience on the team (one of our mottos is "You get out of it what you put into it."). However, we understand that students have other interests and activities. We also require students to put school first!

2.1. Preseason

- September to December
- 6:00 PM - 8:00 PM on Tuesdays at Penfield High School
- Approximately 15 weekly team meetings

Part of the time will be to cover team management, including administrative tasks, the plan for the coming week and any upcoming deadlines. The remaining meeting time will be used for presentations, training, work-sessions, or team building activities. The team will use the preseason as a time to do team building, fundraisers, community service, and to learn about the necessary skills needed for the upcoming build season.

2.2. Build Season

January through mid-February (six weeks long)

- Kickoff (when the game is revealed) is usually the first Saturday of January
- 5:00PM – 10:00PM Tuesdays through Thursdays
- 10:00AM – 12:00AM Saturdays
- 10:00AM – 6:00PM Sundays

Team members do not have to attend every meeting, but are expected to put in productive hours helping to design and build the robot. The team will also host the Rochester Rally pre-ship event for local area teams (see Hosted Events in section 6).

2.3. Competition

- March through April
- Meeting times usually follow the build season schedule in order to prepare for upcoming events, but will be determined on an as-needed basis

The robot and the team travel to regional competition sites, usually within a 6-hour driving distance, which the team will vote on. Typically, the team will compete in the RIT Finger Lakes Regional, another March event such as the Toronto Regional or the Cleveland Regional, and if

we qualify, the International Championships in St. Louis in mid-late April. This is the height and excitement of the robotics season!!

2.4. Summer

- May through August
- 6:00 PM - 8:00 PM on Tuesdays at Penfield High School

Summer is a great time to get started on activities and projects prior to preseason, and a good time to do demonstrations, fundraising and community service. The Leadership team (see section 5) will be formed at the end of the competition season to take full advantage of summer to plan the next season.

3. STUDENT EXPECTATIONS

Students on Team 1511 should be **actively involved** with the team. Depending on school and extracurricular schedules, some students may be able to participate more fully than others. **The level of participation determines whether or not a student's trips will be paid for during competition season.** Students are expected to show up **on time** for team meetings and events and remain for the duration of these.

Students will put priority on their grades over any team need. **Grades are important**. Students must complete school work before participating in team work sessions and activities. However, we do offer homework help, especially during build season when we are putting in long hours.

All members are encouraged to participate in **community service, robot demonstrations** and **fundraising** activities throughout the year. These activities are vital for the success of the team – and they're a great way to have fun with your teammates!

3.1. Student Commitment

You get out what you put in.

Participating in *FIRST* requires energy and time, but the effort will make a positive impact in the lives of many other people. Attendance is taken at all activities, and it is the **student's responsibility to sign in** in order to receive credit. All students are expected to show up on time and to stay for the required amount of time. Exceptions or special needs should be discussed with the team leader prior to the meeting(s) and will be evaluated on a case by case basis. Every team member will be allowed to travel to competitions, regardless of their level of participation, but **payment for travel from team funds will be determined by the student's participation**. A checklist of achievements that are required in order to have trips paid for is at the end of this handbook. **Completing achievements is not mandatory to be part of the team or go on trips.**

New and returning student achievements are detailed separately. Returning team members have higher expectations placed on them as they usually participate over the summer doing fundraisers, community service and demonstrations. **New students are defined as those who**

have NEVER participated in Team 1511. However, new students (including those going into 9th grade) are welcome to participate in summer events and will get credit for them.

Recording of activities for each year's achievements **starts after competition season (mid-April) by a team mentor**. They will be saved in an online database at www.penfieldrobotics.com/achievements for students to view their progress. **Students can only login to this database if they are registered on the team forum!**

Here is a brief outline of the achievement levels:

Achievement Levels

There are 5 levels of Achievements that you can earn: 100%, 75%, 50%, 25% and 0%.

100%: You have completed all achievements. Your only cost for travel will be the deposits. Deposits are based on the amount of fundraising the team did as a whole.

75%: You have completed most of your achievements, including ALL fundraising, but some achievements have not been completed (i.e. attended only 1 of 3 FLL events, participated in only 2 of 3 robot demonstrations). You will only have to pay the deposits and 25% of the trip costs.

50%: Most students reach this level with a normal amount of team participation. You have participated in most achievements, but have not fulfilled all of them. You will have to pay the deposits and 50% of trip costs.

25%: You have very minimal involvement on the team, perhaps only participating in Preseason or Build Season. You will have to pay the deposits and 75% of trip costs.

0%: This is very difficult to get if you truly are a team member. This is if you have signed up for trips, but you have never attended a team activity. You will be responsible for paying all deposits and total trip costs. However, students at this level will be evaluated on a per case basis as to whether they will be allowed to attend competitions as they are for team members only.

HINT: Just because you completed an achievement, does not mean that you should stop participating (i.e. you attended 3 demonstrations and do not participate in anymore demonstrations). Your achievement level may go UP if you go above and beyond by participating in more than the minimum achievement requirement!

3.1.1. Achievements Outlined in Detail

This section discusses the expectations for students who want full payment for their trips. It is the responsibility of the **entire team** to make sure that there are adequate opportunities to fulfill the achievements. Though the Leadership team will provide guidance, all students, parents, and mentors are encouraged to head up activities that the team can participate in. It is up to the **students** to take responsibility to fulfill achievements. All students are encouraged to lead activities that they may need for achievements.

A checklist of achievements is found at the end of this handbook.

3.1.2 Contract and Application

In order to be able to participate on the team, students must fill out a contract (found on the last page of this handbook) and an application, which is handed out at the team meetings and is due October 1, 2013.

3.1.3 Team Meetings

Team members are expected to participate in team meetings, work sessions, community involvement, and fundraising events during the preseason and build season.

3.1.3.1 Preseason

New students are **required to attend at least 50%** of weekly team meetings to meet the achievement goal. Returning students will be **required to attend 10 of 15** meetings. In the preseason, subteams (see section 5.2) will meet separately and establish their own agendas. Subteam meetings cannot be counted as substitutes for full team meetings.

3.1.3.2 Build Season

Each new team member must invest at least **50 hours** of time during the build season (which can include up to **10 homework hours**) to meet the achievement goal. Each returning team member must invest at least **60 hours** of time (which can include up to **10 homework hours)** to meet the achievement goal.

A **suggested schedule** of participation to obtain the minimum hours would be 4 hours a day for 6 weekend days (24 hours), and 3 hours a day for 12 weekdays (36 hrs), including homework. However, students can put in hours in many ways to suit individual schedules. They **must be PRODUCTIVE hours**. Students will be required to do timecards on a regular basis and get a **mentor to sign off** on their hours, verifying that they have used the time to benefit the team.

Although this may seem like an overwhelming amount of hours, most students easily surpass this amount and fulfill this achievement.

3.1.3.3 Homework Hours

Each student can apply **up to 10 homework hours** toward their build season hours. Students are welcome to work on homework at build season meetings even if it exceeds 10 hours. These hours must be conducted in the presence of a team mentor, at a team study session, or with the team teacher(s). The idea is to provide the students with a quiet location in which to assure they are completing their assignments during the hectic build season.

3.1.4 Subteam Participation (Preseason)

All students will be required to **participate in at least one subteam during** the preseason. The student must attend a minimum of **50% of ONE subteam's meetings**, and must **declare their main subteam by the end of September**. If a student is on multiple subteams, the achievement applies to the student's **main** subteam. For example, if a student is on the electrical and mechanical subteams, and only attends 25% of each subteam's meetings, that DOES NOT add up to 50% attendance. The idea is to **put quality work into at least one subteam**, and then branch out beyond that as the student is interested. (Note that the secondary subteam may not be attended as a main subteam.)

3.1.5 Community Service and Robot Demonstrations

Making a difference, not just a robot!

The purpose of our team participating in community activities is to **serve our community and to spread the word about the *FIRST* program, gracious professionalism, and Team 1511.** Community activities will be posted on the forums and the calendar. Suggestions for community involvement are always welcome and encouraged!

All new students need to put in **at least 3 hours of community service** time and participate in at least **one activity** to meet the achievement goal. Returning members need to put in at least **10 hours** and participate in at least **3 community service activities**. This means, for example, a returning student can participate in two 4-hour activities and one 2-hour activity, and their achievement is complete.

Every new student will need to participate in **one robot demonstration** to meet the achievement goal. Each returning student will be required to participate in **three demos**, and **organize a robot demonstration or community service event**. Please refer to the Wiki on our website for instructions on how to organize these events.

3.1.5.1 Summer Fairs

This is a **returning member** achievement only. Our team participates in three large events over the summer, the Monroe County Fair, the Park Avenue Festival and the New York State Fair. Returning students are required to put in a total of 10 hours at the fair(s) in any combination (i.e. a student may fulfill all 10 hours at one fair). The hours can include participating in set up and break down of our events.

3.1.6 Fundraising

Fundraising is an important part of the team's budget – the more money we raise, the smaller the deposit each student has to make for travel to competitions! Every student is expected to participate in the team's fundraising efforts.

To meet the achievement goal, every new student will need to participate in at least 3 fundraisers, and every returning student will need to participate in at least 5 fundraisers, before the preseason ends. (The Patron Drive, Pizza/Candy Sales, and Car Wash are separate events and do not count toward the fundraiser achievement.) If a fundraising event is large enough scale to necessitate the planning is done by more than one individual, then those two or more people will receive a fundraising credit. Fundraisers must be approved by the leadership team and the school before occurring.

Please refer to the Wiki on our website for instructions on how to do a fundraiser. There are also multiple fundraising ideas listed and updated on the Forums.

3.1.6.1 Patron drive

Sponsorship from businesses is an easy way to raise money, and a great way to get out the word about Team 1511 and *FIRST* robotics! Each new student will be expected to **EITHER visit 5 businesses, OR get $250 in donations** towards the patron book. Returning students must visit **10 businesses or get $500**. Businesses will be assigned by a team mentor or parent to prevent doubling on patrons. If you have a preference, or a new business to visit, please address this with the mentor or parent in charge of the Patron Drive.

Students may work as teams, but each individual student must have a list of separate businesses or donations amounting to $500. For example, if two returning students go together, they will be expected TOGETHER to visit 20 businesses or obtain $1,000. The team will do its best to divide up donors from prior years, but students who obtained the sponsorships in prior years will be given preference.

3.1.6.2 Pizza and Candy Sales

Students are required to participate in at least **one pizza and candy sale.** Pizza and candy sales are organized by a student and held after school, usually for one hour, twice a week. The sales are held for several months, allowing students to have ample opportunity to fulfill this achievement.

3.1.6.3 Car Wash

Every returning student must help out with at least **one car wash** in order to meet the achievement goal. Because car washes are generally held over the summer, new students do not need to fulfill this achievement. However, new students who do participate will get credit.

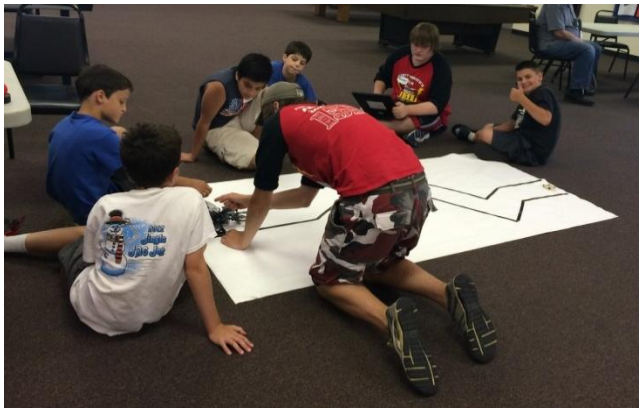
3.1.6.4 Organizing Fundraisers

Every returning student will be **expected to help organize at least one fundraiser**. Organization teams can be from 2-4 students, depending on the size of the event. The organization group will be responsible for all publicity, announcements, forms, estimates, sign-ups, etc. For students to earn their fundraiser achievement, a fundraiser should bring in at least $50 per organizer, after any costs.

Team Uniforms (team shirt and red camouflage pants/shorts) MUST be worn to ALL team events (community service, fundraiser and demo) in order to receive credit for the activity. For new students, red shirts/sweatshirts or PHS attire will be sufficient. For more details on Team Uniforms, please see Section 8.3.

Each activity will have a student responsible for organizing the activity, communicating it to the volunteers, and arranging for transportation, a camera and a team adult participant. **Students WILL NOT receive credit for activities for which no photos were submitted**, so it is in the best interest of all students involved to ensure that photos are taken and turned in.

3.1.7 *FIRST* LEGO League (FLL) and *FIRST* Tech Challenge (FTC) Involvement



FIRST LEGO League (FLL) is the middle school level of *FIRST*, ages 9 to 14. It is a goal of 1511 to support the FLL program as we have helped over 100 teams in our community. Their season kicks off in late September, and ends with a Championship Tournament at the University of Rochester in early December. Winners of the tournament earn a spot at the World Championships.

FIRST Tech Challenge is for grades 7 to 12, building a robot that is much smaller than an FRC robot with a pre-made kit. Their season kicks off in early September, and ends with a Championship Tournament in early December. Winners of the tournament earn a spot at the World Championships.
To meet the achievement goal, each new student must participate in at least two FLL or FTC activities, and each returning student must participate in three FLL or FTC activities. This can be volunteering at the FLL/FTC kickoff or Tournament, mentoring a team, doing a robot demo or a camp for an FLL team, or helping at any other Team 1511 FLL/FTC related activity, such as Rumble (our FLL offseason event) or Razzle Dazzle (our pre-competition FLL scrimmage).

3.1.8 Parental Involvement

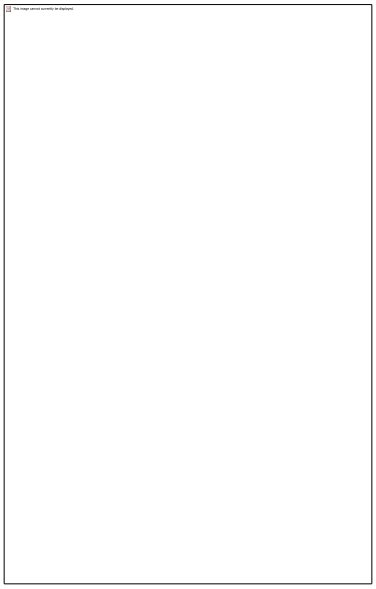
The team does a lot throughout the entire year and can always use parent volunteers in many facets. Here's a great way that parents can save money on student trips to competitions and understand what goes on with the team – meet these simple and fun achievements!

Parents/guardians need to:

- Attend a Parent Info Session at the beginning of the year (September)
- Attend mandatory pre-travel meetings (February/March)
- Attend one team activity during the year prior to competition (fundraiser, community service, demonstration, etc.)
- Attend at least one of the following "competition" events in the Rochester area: Ruckus (October), Rally (mid-February), or Finger Lakes Regional at RIT (March)
- Provide at least one meal during build season (see section 3.1.9 below)

Section 4.2 details more fun ways that parents can be involved with the team and help out!

3.1.9 Family Brings A Meal



Every family is asked to bring at least one meal during the build season. There will be approximately 45 meals needed during build season. Mentors and students work very hard during this time, and it is important for them to be well nourished. The mentors are providing their time and expertise on a volunteer basis – they are not paid! A tasty meal is a wonderful "thank you" for the effort they put in.

Meals include dinner during the week (Tues - Thurs), and lunch and dinner on the weekends. Meals can be very simple (like ordering pizza, subs, or Chinese food) or as elaborate as you may want. You will receive full information by email in December so that you can sign up for the meal(s) you'd like to provide.

There are additional ways (very much appreciated!) that families can help out if they choose to:

Paper products: We need plates, napkins, and cups throughout the entire pre-season. We also need plates, napkins, cups, bowls, and utensils during the build season.

Beverages: We also need families to donate beverages throughout the build season. It could be a case or two of water, a case or two of soda pop, a few 2-liter bottles of water or soda pop, juices, etc. Coffee and hot chocolate mix is also a great idea! (We do have a coffee maker)

Snacks: During build season (when there can be some late-night sessions!), it really helps to have nutritious snacks on hand. Snack donations are always appreciated.

3.1.10 Communication

Every student is **required to register** for the Team Forums at www.penfieldrobotics.com/forum and on the Chief Delphi forums at www.chiefdelphi.com/forums/portal.php. These serve as excellent inter- and intra-team communication tools.

3.1.11 Game Test

Each year, the game used in the FRC changes. It is important that every team member have a **good understanding of the game and how it works**. This understanding is essential when the team is working on design concepts and game strategy. In addition, everyone on the team should be able to explain the basic idea of *FIRST* and the fundamental elements of the game to judges and the general public. **Passing the test is a requirement for attending competitions! Tests must be proctored by an adult team member.**

3.1.11.1 Drive Team and Pit Crew Grades: 100%

Members of the drive team and pit crew will be expected to **pass the game test with a perfect score**. It is essential that the drive team and pit crew fully understand the game, all of the rules, and especially all of the methods of scoring points or receiving penalties. All potential drivers, coaches, human players, and pit crew members will have to pass the written test before the drive team, backup drive team, and pit crew are selected.

3.1.11.2 Returning Team Member Grades: 90%

Returning members of the team that are not part of the drive team or pit crew will be expected to pass the game test with a **90% score** or higher.

3.1.11.3 New Team Member Grades: 80%

New members of the team that are not part of the drive team or pit crew will be expected to pass the game test with an **80% score** or higher.

3.1.12 Tools Test

All students are required to work on the robot. This includes a working knowledge of all tools that are used in the shop. Students should be able to identify these tools.

All students, new and returning, are required to receive **100%** on the test.

3.1.13 Take as many times as needed

The Game Test and Tools Test are **viewed as a learning tool**, and everyone will be **allowed to take the tests as many times as needed** until they pass. However, all tests MUST be passed before our first competition (usually in early March). However, we strongly encourage students to pass the test before the end of build season as that is when there is the most opportunity for an adult proctor to be present.

3.1.14 Training/Safety Test

These will be administered by the teachers as the school requires all students, regardless of how they participate on the team, to be familiar with and know how to use all of the tools and machinery in the shop. This is mainly for safety reasons and because you will eventually use these machines and tools to work on the robot as all students work on the robot.

This involves a brief overview with the teachers, a safety talk, and a test that you must get 100% on. You can take this test as many times as you need. You will not be able to use the tools or machinery in the shop until you complete this training.

3.1.15 Inability to Complete Achievements

There are occasionally extenuating circumstances that may prevent a student from fulfilling all of these achievements. In this case, it is best for the student and/or parent/guardian to bring the situation to the **lead mentor's** attention for consideration on how best to accommodate these circumstances. We want all students to have the ability to fulfill these achievements and have their trips funded.

3.2 School Eligibility

Success is an important part of *FIRST* and Team 1511. It is not restricted to the robot, game performance, or how many trophies the team is awarded. Team members are successful only when they succeed in the classroom, and then participate in team activities. All team members are expected to make school work and individual academic performance a priority over any team event or activity. To implement this concept, every student will have to **maintain eligibility through school rules**. Please see the PHS Student Handbook for more information on eligibility requirements. Students that fall below this minimum requirement will not be allowed to participate with the team, but will need to focus on improving their overall academic performance.

3.2.3 Ineligibility

Students that fail to meet the minimum grade requirement established by the school will be **ineligible for one grading period**. During the ineligibility period, the student will be expected to focus on improving their grades, and cannot attend any team events or participate in building the robot. Once the student establishes a new grade average that removes them from the ineligibility list, the student will then become eligible, and will be allowed to fully participate on the team again.

3.2.4 Help Available

Any student member of the team that is struggling with school work can seek help. The team will have **resources available to help students with school work**. You do not need to be ineligible or on probation to seek/receive help – just ask! If you don't know who to ask, then talk to the lead mentor for guidance. Student members that are ineligible or on probation should expect to be offered help, as we want all of our students to succeed academically as well as on the team.

3.2.5 School Takes Precedence

Academic performance takes precedence over team activities and events. Students are expected to complete all school work before participating in team events or activities.

3.3 Team Rules

We ask that EVERYONE **treat each member of the team with respect** and treat others the way that they want to be treated. We also want **EVERYONE to have fun**!! The most important part of the team is learning while having fun.

Our team is large and has many tasks. We also travel to many areas around our local community and beyond. In an effort to be a fun, role model team and to keep everyone on our team safe and accounted for, we have several rules.

A. **Buddy System** – Students are not allowed to travel by themselves. Students must have a buddy with them at all times. However, you may not have a buddy of the opposite gender. If you do, then you must have a third buddy.
B. **Be nice to everyone** – At competitions, members of the *FIRST* community and judges are everywhere. In addition to the venue, they are on the street, in the same hotel as us, or eating at the same places as us. We ask that, as a general rule, everyone be respectful of everyone they meet. This means being quiet in the halls of the hotel, watching your language at all times, even among friends, and being polite and friendly to everyone you encounter.
C. **No drama!** – Everyone wants to have a good time and the best way to avoid that is by reducing the amount of drama. If you have a real issue, it is best to discuss it with a teacher or chaperone.
D. **No working alone** – Students are not allowed to be working in any rooms, especially the work shop, without an adult present.
E. **Clean up after yourselves** – No one wants to clean up your mess, so it's your responsibility to do so. This includes throwing out your dishes after team meals, logging out of computers you're working on, cleaning machines and sweeping the floor after working in the shop, and putting away any materials where you found them in our various storage areas.

We have found that if these simple rules are followed, everyone has a great experience.

3.3.1 Behavior

All school rules of conduct apply to our team. **Each team member is ultimately responsible for his / her own behavior**. However, how team members behave will reflect on the team, the school, and the sponsors. You are expected, at all times, to be polite and respectful of everyone, and to refrain from activities that are considered disruptive. We are all role models and our goal is to present an image that is positive and in the spirit of team building – not a phony image, but an authentic attitude of appreciation and professionalism. Negative behavior such as shoving, hitting, fighting, name calling, destructiveness, stealing, or constant griping and complaining are not helpful and will not be tolerated. Inappropriate behavior will be subject to disciplinary action up to and including suspension from the team. Additionally, team members **WILL NOT play computer games** during meetings or times when they could be more productive. If students are disruptive or are not participating in the team-assigned activity, he / she will be sent home. We like to have fun, but also have cooperative, productive participants.

Disciplinary Action

Disciplinary Action may need to be taken on an as needed basis. This will be determined by the lead teacher and the team leader. Oftentimes, the student will be given a verbal warning. Based on the level of the offense, the student may be removed from team participation for one week, or removed from the team entirely.

Students are expected to adhere to the requests of all mentors and teachers on the team. If a student has an issue with a specific request, he / she must talk to the lead mentor or teacher advisor. Mentors and Teachers are trained in proper behavior with students and requests should not be unusual. (Requests are usually to terminate a behavior that is inappropriate or disruptive.)

3.3.3 Safety

Remember that **safety comes *FIRST*, LAST, and ALWAYS**. Always **wear safety glasses**, tie back loose hair and clothing, and wear closed-toed shoes when working on the robot or going into the pit area. *FIRST* requires teams to bring safety glasses to competitions – they don't require a robot, but they do require safety glasses!

You can help keep everyone be safe by making fliers, pamphlets, and DVD's about proper safety procedures. Safety and Shop training is offered at the beginning of the season. Every student should attend this training. A student **safety captain** will be designated at the start of the build season. This safety captain will be responsible for making sure that EVERYONE follows proper safety procedures. However, **everyone** should be aware of the safety rules and make sure everyone is acting safely.

3 ADULT MEMBER EXPECTATIONS

Mentors, parents, teachers, and alumni on Team 1511 are encouraged to be **actively involved** with the team. We invite you to participate in team events, meetings, and work sessions – we have a good time, and we think you will, too!

4.1 Mentor Roles and Responsibilities

4.1.1 Commitment

Helping the students reach their full potential is the primary reason for participating in *FIRST*. We know that mentors have families, jobs, and other important commitments outside of *FIRST*. We ask that mentors properly inform us up front of how much time they think they will be able to contribute. There are many different ways to contribute to the team (not just technically!), and we will find something that will fit your schedule and interests, but we also highly encourage you to jump right in! Involvement may include anything from preseason subteams and meetings, to fundraising, to community service activities, to build season work. Mentors are asked to participate outside of build season whenever possible, as it helps with teambuilding and getting team activities done. The rewards of putting forth this commitment are plentiful!

FIRST has also published a Mentoring Guide that is a good introduction and discussion of the fundamentals of mentoring. Please refer to it for additional information.

4.1.2 Leadership

The leadership of this team is a cooperative effort between mentors and student leaders. Each year's student leaders are selected after competition season ends, so that they have the summer to plan the next year's activities. The main advisors of the Leadership team are Larry Lewis and Leann Lewis. Mentors with ample time are encouraged to support and participate in the Leadership team. Mentors are also expected to help lead and guide the subteams with the students.

4.2 Parents/Guardians

Parents/guardians are an integral part of our team and important to our success. The robotics team becomes a family throughout the year because the members spend a lot of time together. The students learn about hard work, perseverance, commitment, patience, joy, defeat, computer skills, respect, engineering, writing, interviewing, business skills, money management, marketing, production, publishing, kindness, time management, and most importantly, gracious professionalism. Having the involvement of their parents will only enhance this experience for them.

Requirements for parents/guardians are listed in section 3.1.6 above. In addition, some things the team needs from parents are:

- Providing timely transportation for their student to/from team events (this may include car-pooling)
- Assisting and supporting their student in fundraising, robot demo and community service activities

- Providing accurate medical information for their student, and keeping the team leader informed of any changes
- Participating in any team activities – it really helps to have parents present at these events! Parents are frequently needed to transport the robot(s) and students to and from demos, to provide adult supervision at car wash fundraisers, etc.
- Chaperoning team trips*
- Helping your student organize an event or activity
- Mentoring*
- Administrative duties (Patron Drive, Awards Submissions, Marketing, PR)

*Parents who chaperone will have their trip paid for in full. The team may also pay for travel based on parents' level of involvement on the team. Oftentimes, this level of involvement means that you have mentored throughout the year.

Any and all support that can be provided by you and your family, as well as new ideas, is welcome. Every person has unique attributes that can be put to use for the good of our team. NEMO (Non-Engineering Mentor Organization, www.firstnemo.org) helps parents volunteer with *FIRST* even if they're not involved with the robot. NEMO has a list that shows 101 ways that parents can help a *FIRST* team at: http://www.firstnemo.org/PDF/101_ways_parents_can_help.pdf.

4.3 Teacher Roles/ Responsibilities

Teachers are important assets to our team. They are responsible for:

- Facilitating communication with the school
- Filling out legal absence forms in advance of trips
- Explaining school rules and implementing them
- Head chaperones for trips
- Helping with recruiting efforts and promoting any events or activities within the school
- Maintaining order and appropriate student behavior at team meetings and events

The main teacher will act as the school liaison, and will attend team meetings whenever possible. Additional teacher support can be used to help facilitate subteams, as well as to help divide up supervision of competitions and other school-related duties.

4.4 College Student & Alumni Volunteers

College students and alumni who are under age 21 and have graduated from high school fall under this category. They do not have mentor responsibilities such as direct mentoring of students or discipline of students. They support the team by sharing their *FIRST* experiences, acting as a role model to the students, and participating in any events, team meetings, and

subteams. They also may come to competitions and the team may pay for their travel based on their level of participation.

4.5 Team Alumni Involvement

Team 1511 has a growing number of alumni who want to stay involved with the team in some way. We welcome their involvement, whether it's in a mentoring role, attending events to cheer the team on, or simply staying in communication on the forums.

4.6 Chairman's Team

Being a Chairman's Team requires our team to go above and beyond just building a robot. This means that our team is a role model for other teams and our community, demonstrating gracious professionalism and the most respectful form of sportsmanship at all times. This also means expanding our outreach to the community through robot demonstrations and community service. We ask that all team members, including adults, help us in achieving our goal. Although our team strives to submit a strong entry for the Chairman's Award, winning the award is not our goal, our goal is to follow the conceptual model behind the award.

5 TEAM STRUCTURE

5.1 Team Leadership

The team Leadership group will be **comprised of students selected by lead mentors and elected by their peers and the team, as well as mentors**. If team members not on the Leadership team have concerns, questions, or suggestions, he/she may email the leadership@penfieldrobotics.com and this will be discussed at the following Leadership meeting.

5.1.1 Meetings

The Leadership team will meet once a week for 1 to 2 hours every week throughout the year. Some meetings may be cancelled due to holidays, etc. at the discretion of the lead mentor and based on available attendance. Meeting times will be determined by the Leadership members' availability.

5.1.2 Leadership Responsibilities

The Leadership team will be in charge of:

- Coming up with agendas and running the team meetings
- Organizing the preseason curriculum
- Making decisions about the team (including, but not limited to, the decision to participate in robot demonstrations, community service activities, rule changes, etc.)
- Creating and distributing team emails
- Maintaining and updating the team calendar
- Maintaining team funds

5.1.3 Election Procedure

Students interested in applying for a Student Leadership position will:

1. Apply using a written application.
Mentors will review applications and select students to move on to the next round.

2. Interviewed by a panel of mentors.
Mentors will evaluate and pass students to the final round.

3. Short speech to entire team.
The team will then vote to elect the student leaders for the upcoming school year.

Students must apply for Leadership every year regardless if they have been on Leadership before.

A maximum of eight student leaders will be selected. Each grade will be represented by at least one leader from that grade. Seven student leaders are elected in the spring for the next school year. In the fall, the eighth leadership spot will be filled by a **new** student member from any grade.

The Leadership team selects the Team Captain(s) from among them. Within the Leadership group, additional roles and responsibilities will be assigned. The main roles of Leadership are: Team Captain, Treasurer, Team Communications and Events Coordinator, Media & Marketing Coordinator, Student Coordinator, Subteam Coordinator, and *FIRST* Coordinator.

5.2 Subteams

Each subteam, in both preseason and build season, will **determine a student leader and a mentor leader** to be in charge of reporting progress and interfacing with the other subteams.

5.2.1 Preseason

In the preseason, subteams will be set up to take care of team functionality and to learn the knowledge necessary for the build season. Each subteam will meet at a different time, separate from the team meeting. Subteams will determine their meeting times and days based on the availability of the subteams' members. The following is a list of the subteams and their potential tasks. Each subteam will be asked to **determine their goals for the preseason**, so these tasks may change.

Subteams are categorized as Primary or Secondary. Primary subteams are the main subteams that students should participate in to learn valuable skills. Secondary subteams are support subteams that have important roles on the team, but students should only participate in these in addition to their primary subteam(s). Students must participate in a Primary subteam in order to receive the achievement. Students are also invited to participate in any other primary or secondary subteams that interest them, but must elect their main subteam that will be counted for the achievement. Again, students participating in multiple primary subteams cannot combine attendance of multiple primary subteam meetings in order to complete the achievement.

Primary Subteams:

Mechanical

- Learn Autodesk Inventor
- Design and build preseason drivetrain
- Design and build preseason mechanism
- Review past year's competition for ideas
- Clean and rework prior robots' mechanical systems
- Study other teams' previous robot designs for ideas

Electrical/Pneumatics

- Develop a preseason prototype board
- Learn motor characteristics
- Learn wiring diagram
- Learn pneumatics rules/regulations
- Develop a sample pneumatics demonstration
- Clean and rework prior robots' electrical systems
- Experiment with sensors

Programming

- Learn C++ programming language
- Understand last year's code
- Make modifications/improvements to prior robots' code
- Develop techniques for autonomous mode
- Write code for all available sensors

Marketing

- **Flare**
  - Discuss/rework logo
  - Design team shirts and buttons
  - Record all team meetings and events through photo and video
  - Update Smug Mug
  - Create team recruiting videos and promotional videos
  - Determine submissions/criteria for other awards: WFA, Technical, etc. and help team achieve them
  - Update the Website content

- **Corporate**
  - Create team fliers, pamphlets, team newsletter and marketing items
  - New member recruiting
  - Monitor team budgets and fundraising budget (with treasurer)
  - Maintain student handbook
  - Keep track of student/team achievements
  - Organize/oversee fundraisers
  - Run the Patron Drive and develop the Patron Book
  - Help with Animation and Animation Submissions as needed

Secondary Subteams:

Award Submissions

- Review criteria for the various awards submissions
- Gather and document the necessary information needed for each submission
- Brainstorm any themes or ideas how we will present our submission
- Begin writing the essays necessary for submission

Strategy/Drive Team

- Review and learn the rules from last year
- Decide on methods for strategy development
- Train drivers and human players
- Come up with scouting strategies and software/database

5.2.1.1 Build season

During build season, the subteam activity will change. The Animation, Strategy/Drive/Rules, Awards Submissions and Marketing subteams will continue with their work from preseason. The Mechanical team will branch out into designing the Drivetrain and Mechanisms as required by the game, and the Electrical and Programming teams will work with the Mechanical teams to integrate a fully functional robot.

Team 1511 constantly works to improve our build season process, making teamwork between the subteams smoother by holding regular integration meetings. Additionally, each robot-related subteam creates "engineering notebooks" during build season, which

are posted on the Wiki. Each engineering notebook entry includes the names of team members participating, the date and start/stop times, the tasks accomplished, and the next tasks to do. Entries can also include lessons learned that day, photos, details, spreadsheets, CAD screenshots or drawings, etc. The purpose is to make it easy for someone to pick up a subteam's ideas and keep them going if no one from that subteam is present.

Students and mentors in each subteam are expected to communicate when they will be able to attend build season meetings to optimize their time.

Below are descriptions of some of the important goals for subteams during build season.

Strategy/Drive/Rules:

- Everyone on the drive team must read and understand all the rules in the game manual.
- Select drivers, human players, and coaches for a primary and secondary drive team.
- Train drivers, human players, and coaches how to correctly play the game.
- Train drivers on how to handle driving the robot.
- Members must work together to develop strategies for game play.
- Coaches must be familiar with these strategies and be able to inform the drivers on how to carry out the strategy.
- Scouting will be done before, during, and sometimes after competitions. Scouting includes robot design and performance, practice round results, and match results.
- Data retrieved from scouting will be analyzed so that coaches can develop new strategies and select team alliances.

Drivetrain Design:

- Responsible for selecting a drivetrain design that matches the team's primary strategies.
- Will design the drivetrain in CAD, select and design wheels, and procure and build all drivetrain parts, then assemble the drivetrain.
- Should interact with the electrical subteam to determine the placement of the electronic components.

Mechanism Design:

- Responsible for designing any arm, gripper, manipulator, or other mechanism that will be used to play the game.
- Will design the mechanism(s) in CAD, select and procure parts, and build all mechanisms.
- Will be responsible for interfacing with the electrical and programming teams to communicate the needs for the robot mechanisms.

Electrical:

- Responsible for designing and laying out the electrical subsystem.
- Will implement all sensor needs, and make sure that there is appropriate mechanical design to accommodate sensors and electrical components.

Programming:

- Responsible for designing a program that accomplishes the needs of all the functions of the robot.
- Responsible for determining best implementation of autonomous modes, and should communicate sensor needs with the electrical subteam.

Programming:

- Analyze field drawings from first and determine method of designing game field for Rally.
- Create a bill of materials for what is needed to build the field.
- Fabricate and assemble the field in time for the Rochester Rally Pre-ship event.
- Store materials in a way that they can be reused for later demonstrations.

5.2.2 Integration

Communication among subteams is important to **keep the team coordinated and productive and on task**. Representatives from each subteam will meet regularly to discuss their subteam's progress. One student from each subteam will act as a delegate for their subteam. They are responsible for providing everyone in the group highlights of what their subteam has been doing, as well as bringing back information from the meeting to the rest of their subteam. The number of Integration meetings per week will be determined by the Team Leader. During these meetings, any needs a subteam has will be addressed and acknowledged by the other subteams.

5.2.3 Communication

Team 1511 will have several forms of communication in order to keep everyone informed. A **weekly email** will be sent to all members. All events will be posted on the calendar, which is linked to the forums. The **forums** are an informal way for the team to communicate and record ideas electronically, and should serve as the main repository for ideas, minutes, and anything that may be of interest. The Corporate and Leadership groups will be responsible for creating and distributing a **team newsletter**, which is intended to tell the community outside of the team what the team is working on, interesting topics, and present a calendar of activities.
All team members should create accounts on both the team forums (www.penfieldrobotics.com/forum) and on Chief Delphi (www.chiefdelphi.com), which is a great resource for interacting with other teams. Both forums are safe and moderated, but as with all internet communications, students are encouraged to use smart internet activity, not give out personal information, etc.

6 TEAM HOSTED EVENTS

Our team hosts 4 large events. Each event requires a significant amount of time prior to the event to organize and plan it, as well as volunteers to perform various tasks at each event. These are great opportunities for parents to volunteer. Below is a brief overview of each event.

6.1 Rochester Rally

Rochester Rally occurs at the end of the Build Season, usually late February. It is hosted at Penfield High School. We build a replica of the competition field and host a scrimmage for local teams to practice their newly built robots. We invite speakers from businesses in the community, including Harris, to speak at the event. We also invite the public and media, and sell concessions.

6.2 Rah Cha Cha Ruckus

Rah Cha Cha Ruckus occurs in October. It is our Halloween-themed offseason event. It mimics an actual competition, but lasts only one day, so it is a great opportunity for new members and parents to see what the competition will be like. This event is hosted offsite. This year, it will be at the Main Street Armory in Rochester on Saturday, October 12. Thirty-plus teams from several different states and Canada come to participate and it is our biggest, most important event. Planning for this event begins in June and anyone is welcome to join the planning committee. Talk to Larry, our lead mentor and the head of the planning committee, if you are interested in helping next year. We also need many of our team members to volunteer in order to make this event run smoothly. If you're interested in volunteering in the event, you can click on the pumpkin link on our homepage.

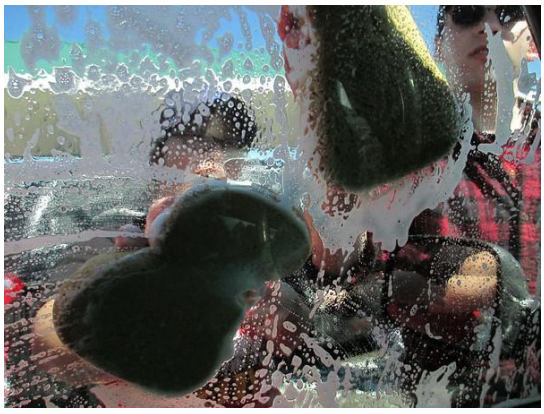
6.3 Razzle Dazzle

Razzle Dazzle is like Rochester Rally, but for FLL. We host a pre-competition scrimmage at Penfield High School for local FLL teams to practice before their official competition season, usually in early November. This event is a little less involved than Rally and Ruckus, but we still require many volunteers to make this event run smoothly.

6.4 Rumble

Rumble is our offseason FLL event held at Penfield High School, usually held in March or April. It allows teams to have another opportunity to compete in that year's game and keep the kids involved in FLL. It is run much like Razzle Dazzle.

7 FUNDRAISING



Harris Corporation is very generous to the team, but **we also need to raise funds to help offset team travel costs.** Fundraising may include bottle/can drives, pizza and candy sales at the high school, car washes, pancake breakfasts, etc. Fundraising forms are submitted through the team treasurer with estimates on costs and profit. (See section 3.1.4 for the fundraising achievements expected from new and returning team members.)

7.1 Fundraising Process

Students organizing fundraisers are responsible for filling out a team fundraising form, as well as the green fundraising forms that are turned into the school through the team treasurer. The school will notify the team when the fundraiser has been approved. Once it is approved, the organizing students should proceed with organizing and running the fundraiser. Any fundraiser that requires more than $100 of upfront cost will first have to be approved by the lead mentor before it is submitted to the school.

Many fundraising ideas and opportunities are posted on the Fundraising forum under the Corporate Subteam board. However, it is the responsibility of students to find fundraising opportunities. Parents are allowed to help their students with finding these opportunities and running the fundraisers. Mentors may also present fundraising opportunities, but are not expected to organize them.

8 TRAVEL/ COMPETITION

Regional and Championship competitions are the high-spirited and exciting "robotics sporting events" that take place in March and April nationally and abroad.

8.1 Schedule

The regional events that we choose will be in the northeastern United States and southern Canada, usually within a 6 hour drive of Rochester. Anywhere between 30 and 80 teams compete at each event. We generally attend the **Finger Lakes Regional at RIT and a second regional based upon schedule and location.** The drive team and pit crew leave a day ahead of the rest of the team (Wednesday), and the actual competitions are two-day events (Friday – Saturday) with travel on Thursday.
The second regional will be a bus trip, and **permission forms and medical forms will be required** for each student. Parents and family are welcome and encouraged to attend and cheer our team on – non-chaperoning family can often get the team rate for travel (bus and/or hotel), so by all means inquire about traveling with the team. Chaperones will also be needed (parents, this is a GREAT way to attend the competitions without breaking your budget!). The team will attend the Championship event in St. Louis only if we qualify. We travel to the Championship event by bus. **If each team member completes their achievements (fundraising, community service, etc.) the only cost to each student will be the deposit, food, and souvenirs.**

Deposits are non-refundable. Trip costs are not refundable **after the deadline**. However, if there are extenuating circumstances (i.e. an unexpected death in the family), they will be considered on a case by case basis by the team leader.

8.2 Rules

All rules and behavior expectations from section 3.3 apply to travel and competition. All school rules for field trips apply as well. Additional rules will be discussed in a pre-travel team meeting, which parents are encouraged to attend (the date, which will most likely be the Tuesday before our first competition, will be announced in the weekly team email). All questions about rules and travel can be asked at this meeting.

8.3 Uniforms

All team members will wear a uniform designed by our team members that is unique to our team and helps us be recognized at events. Currently, the uniform is **a team shirt and red camouflage pants that will be worn at all events on all days.** The team will also likely have sweatshirts, hoodies, etc. available for purchase. Each active team member (students, mentors, and parent mentors) will be provided **two team shirts**, but the team member and any family or friends can buy additional shirts or uniform pieces. The two team shirts can be worn on the Friday

and Saturday competition days. Thursday, practice day of competition, is our "Throwback Thursday" where returning team members will wear previous years' shirts.

All team members will be **REQUIRED to wear team uniforms** (minimum of a team shirt and red camo pants) at all competitions, robot demonstrations, community service events, and fundraisers in order to represent the team and obtain credit for participating in the event. The exception to this is if an organization requires volunteer shirts (e.g., volunteering for marathons) or if you are a new student and have yet to obtain team gear. New students may also purchase team gear from previous years at a discount price. Otherwise, you may wear team colors (red/black/white) or a Penfield High School shirt.

Exceptions may be made if directed to wear something different by a Lead Mentor or Teacher (i.e Chairman's presenters, Team Mascot). If an adult (Teacher, Mentor, Parent) asks a student to change what he/she is wearing because it does not follow school or team dress code, then students are expected to abide by this request.

8.3.1 Appropriate Wear

What you wear at team meetings and events should be appropriate, and follow the Penfield High School Dress Code. We are working in a semi-professional environment with professional adults so clothing that is revealing, loose, or not appropriate for the workshop should not be worn. If you are not sure if something is appropriate, err on the side of not wearing it. Plus, safety comes first. Make sure you do not have loose strings (i.e. hoodie strings) or clothing/accessories/hair that can get caught in machinery.

8.3.2 Alterations

The camouflage pants may be altered to be shorts or skirt (up to finger-tip length when standing or mid-thigh). At competitions, something should be worn under skirts such as athletic shorts, leggings, etc. as you may need to kneel or crouch down.

The shirt sleeves may be hemmed to a shorter length and the size tag can be removed. However, no other alterations may be made to the shirts. The neckline cannot be made wider, slits/holes may not be cut in to the shirt, the shirt design and sponsors may not be altered in any way, and the shirt may not be cut shorter.

8.3.3 Hair/Accessories

You are more than welcome to get creative here! Mohawks, hair dying, face paint, hats, buttons, jewelry, nail polish, other flare items, etc. are all acceptable. Go crazy! But just make sure that it's safe; items are not inhibiting vision of you or others, or can dangle to get caught in machinery.

8.4 Health

All students will make sure to **take care of their health during the year, and especially during build season.** Students are not permitted to provide any form of medication to other students. Any student that becomes ill or injured during a trip should report to a chaperone for appropriate action.

8.5 Forms

All students will be required to submit permission slips and emergency contact information as well as health-related forms in order to attend any of the team events.

9 COLLEGE AND CAREER OPPORTUNITIES

Because someday you'll need to make real money!

As the mission of the *FIRST* program is to inspire students in science and technology fields, it is one of the **team's goals to provide guidance in college and career opportunities for science and technology.**

9.1 Scholarships

Scholarship information is available online at www.usfirst.org (choose "quick links" at the top, then "Scholarships"). There are over $16 million worth of scholarships at colleges and universities all over the country! Mentors will be available to write recommendation letters for any students applying to college or for scholarships. In addition, some colleges and universities have an application fee waiver, which can be provided by an alumnus. Many of our mentors and alumni have attended accredited colleges and universities, such as RIT, Clarkson University, University of Buffalo, Renssalaer Polytechnic Institute.

10 APPLICATION PROCESS

Each team member will be responsible for filling out an application to be on the team. All applications are due in late September, and **NO students or adults who have not submitted a complete application will be allowed at team or subteam meetings after September 27th**. Applications are reviewed by mentors and will be subject to verification before students and adults are admitted.

11 IMPORTANT CONTACTS

Each team member will be supplied with information of who are the key leaders, mentors, teachers, and other team contacts. Please check the forums and your email regularly for important information.

Larry Lewis: Team Leader
Email: larrylewis1511@gmail.com
Cell: 585-339-8834

Mr. Brewer: High School Advisor:
Email: EBrewer@penfield.edu
Work: 585-249-6762

NEW STUDENT ACHIEVEMENTS SHEET

This sheet serves as a reminder of the achievements that are necessary for new students interested in having all of their trips fully funded by the team. New students are students who have NEVER participated in Team 1511.

Please have a mentor who is present at each event sign the submitted attendance sheet. Achievements will not be recorded unless a mentor has signed off on them!

PRESEASON – DUE BEFORE KICKOFF

- ☐ 50% Preseason Team Meetings
- ☐ Preseason Subteam Participation
  - At least one subteam
  - Declare main subteam by the beginning of October
  - 50% of one subteam's meetings
- ☐ Community Service
  - 3 hours
  - 1 activity
  - 1 demonstration
- ☐ Fundraising
  - Patron Drive: 5 businesses or $250
  - Participate in 3 Fundraisers
  - Pizza/Candy sales
- ☐ Participate in Two FLL/FTC Activities
- ☐ Parent Attends Info Session & One Team Event
- ☐ Register on 1511 Forums & Chief Delphi Forums

BUILD SEASON – DUE BEFORE 1st REGIONAL EVENT

- ☐ 50 hrs Build Season Work
  - Can Include up to 10 Homework Hours
- ☐ Family Brings One Meal for Build Season
- ☐ Parent Attends Ruckus, Rally, or FLR
- ☐ Pass Game Test
  - 100% Drive Team & Pit Crew
  - 80% Team
- ☐ Pass Tools Test (100%)
- ☐ Student Eligibility
- ☐ Acceptable Behavior

☐ Application Due 09/30/2014

☐ Contract Signed & Submitted by 10/7/2014

RETURNING STUDENT ACHIEVEMENTS SHEET

This sheet serves as a reminder of the achievements that are necessary for returning students interested in having all of their trips fully funded by the team. Returning students are any students having previously participated in Team 1511.

Please have a mentor who is present at each event sign the submitted attendance sheet. Achievements will not be recorded unless a mentor has signed off on them!

PRESEASON – DUE BEFORE KICKOFF

- ☐ 10 of 15 Preseason Meetings
- ☐ Preseason Subteam Participation
  - At least one subteam
  - Declare main subteam by the beginning of October
  - 50% of one subteam's meetings
- ☐ Community Service
  - 10 hours
  - 3 activities
  - 3 demonstration
  - Organize 1 Demo or Community Service In Preseason
- ☐ Fundraising
  - Patron Drive: 10 businesses or $500
  - Participate in 5 Fundraisers
  - Pizza/Candy sales
  - Organize 1 Fundraiser in Preseason
  - Participate in 1 Carwash
- ☐ Attend the NYS Fair and/or Monroe County Fair for a combined 10 hours
- ☐ Participate in FOUR FLL/FTC Activities
- ☐ Parent Attends Info Session & One Team Event
- ☐ Register on 1511 Forums & Chief Delphi Forums

BUILD SEASON – DUE BEFORE 1st REGIONAL EVENT

- ☐ 60 hrs Build Season Work
  - Can Include up to 10 Homework Hours
- ☐ Family Brings One Meal for Build Season
- ☐ Parent Attends Ruckus, Rally, or FLR
- ☐ Pass Game Test
  - 100% Drive Team & Pit Crew
  - 90% Team
- ☐ Pass Tools Test (100%)
- ☐ Student Eligibility
- ☐ Acceptable Behavior

☐ Application Due 09/30/2014

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STUDENT Contract

I agree that I understand the information presented in the Team Handbook, and that I understand what I need to achieve in order to have full payment of my trips. I know that I will have to place a reserving deposit, but if I fulfill all of the team achievements, the team funding will cover the rest of my travel costs.

I understand that I must act responsibly and respectfully at all times, and that schoolwork comes before team work. I must maintain my grades as required by the school in order to participate in team activities.

Student Signature: _____

Student Name: _____

Date: _____

Parents/Guardians

I understand that my student has chosen to be an active part of this team, and that while any level of participation is encouraged, that my student must meet the team achievements in order to have team funding for his/her travel.

I also understand that I am part of those achievements. I agree to attend an information session, pre-travel meetings, one team event during the year, and one local competition event. I also agree to provide a meal during build season.

I understand that parents can be a vital part of the team, and are a big help in getting many of the team activities accomplished. I will do my best to support my student and the team in this endeavor.

Parent Signature: _____

Parent Name: _____

Date: _____

Due by 10/07/2014