

# 10 STEPS TO BECOMING A FIRST LEGO LEAGUE (FLL) TEAM

## FIRST- (For Inspiration and Recognition of Science and Technology)

### Step One: Find a Coach

- Teams require at least one adult coach, 18 years of age or older.
- Coaches can be: parents, teachers, engineers, scout leaders, or university students, etc. It requires no special skill, just patience, dedication and a willingness to learn alongside the team. The coach needs to direct the process the team follows to solve the Robotic \*Challenge (\*see step 5 for details) without providing the solution.
- Computer skills are not necessary but the coach must have someone assisting (if not him/herself) who has the time to read the important websites and do the on-line registrations and ordering materials.

**Important:** Evaluate the time commitment. FLL teams can meet for as little as one hour to up to 10 hours a week. The time commitment will vary depending on your coaching experience and your team dynamic. A new team can have a learning curve and may need to have longer, more frequent meetings. As your team becomes experienced, meeting less hours may be an option. The *FIRST* organization suggests starting with two meetings per week that are two hours long, and adding or subtracting time as team's needs indicate.

### Step Two: Find the Kids

- An FLL team will have up to 10 children, ages 9 through 14
- A minimum of 3 children is recommended per team
- To be eligible, a child cannot be older than 14 on January 1 of the year that Challenge is announced
- Kids can come from many different schools, after-school programs, home-school groups, scouts, religious groups, neighborhood groups, etc.
- You will need to form your own team or find one already in your area. Ask in schools and check out the Indiana website for a list of team locations.

### Step Three: Find the Mentors

A mentor is any person who works with the team in an area of expertise for at least one team meeting. Mentors help provide one-on-one interaction and serve as resources in their specialties. Some mentor types include:

- *Engineer:* Teaches the necessary skills for the robot's design or the project presentation
- *Science Professional:* An expert on this year's Challenge subject presents real examples of science in practice, advises the team on the project research and its solution, recommends new sources of information for the team.
- *General Volunteer:* Schedules meetings, provides transportation and snacks, helps with fundraising, and provides carpentry assistance for building table borders.
- *Programmer:* Teaches team about programming principles and helps the team troubleshoot programs.

### Step Four: Become a FIRST Lego League Team

There are three (3) kinds of registrations that are associated with being an FLL team. They are highlighted in BOLD RED CAPS.

#### **May-Sept REGISTRATION: FLL TEAM REGISTRATION**

To compete in FLL tournaments, you must register your team at the national website where you will receive an FLL number. You will use this number as an identifier for all tournaments. Visit the national organization's website ( [www.firstlegoleague.org](http://www.firstlegoleague.org) ) to officially register your team with FLL. You will need a valid email address and will create a password to access an account that you will create. The national registration period lasts from May 1 to September 28 (or when all slots are filled.) See table below for costs

### Step Five: Getting what the team needs

- Need a computer, either a Macintosh or PC, with internet access for:
  - finding out about the robotic "Challenge" which has it's "kick off" in September
  - accessing a team forum where you can ask questions and read what other teams have to say
  - researching the yearly theme project

- programming your robot

- Facility for meeting with a smooth floor space for the 4' x 8' mat, or the optional FLL table
- A secure place to store the FLL robot set and partially assembled robots between team meetings
- Order a Lego NXT or RCX Robotic kit. See National website: [www.firstlegoleague.org](http://www.firstlegoleague.org)
- Order your Field Set Up Kit for the \*Challenge (see explanation below)
- Optional: Build a Challenge Table or an abbreviated practice table
- See table below for costs

*\*Challenge: Each year FLL chooses a theme with a corresponding “challenge” to students. The Challenge revolves around a set of tasks that must be performed on the Challenge Field (the Field Set Up Kit provides the Lego structures and mat upon which the tasks must be performed). The Challenge also includes a set of rules/guidelines that must be followed when the team and their robot are performing multiple tasks. During the competition the teams must follow these guidelines which are overseen by a referee, just like in any sport. The Challenge for each year is revealed on the national website in September. Challenges have included Mission Mars, No Limits, Ocean Odyssey, Nanoquest, and Power Puzzle.*

### Step Six: Evaluate Your Cost and Funding for a Team

#### Sample Budget

(Assuming no in-kind donations such as goods or services)

Item	Cost	Comments
FLL Team Registration Fee	\$200	Non-refundable; goes to <i>FIRST</i>
FLL Robot Set-NXT FLL Robot Set-RCX	\$325* \$280*	NXT Recommended for new teams Can be reused for more than one year
FLL Field Set-up Kit	\$65*	Non-refundable. Every team must have or have access to a Field Set-up kit.
Practice Table (optional)	\$25-\$30	Surface and border made of wood: \$25-\$30 Official Table: Add \$30 for sawhorses and \$10 for lighting
Tournament(s) Entry Fee (optional to attend)	\$45 or less -Qualifying \$35 -Championship	Varies with tournament: assume a Qualifying Tournament fee and a Championship Tournament fee
Tackle boxes for storage (optional)	\$10 per box	
Batteries & extension cord	\$30 for the season	
Team spirit items for 10 people max. (i.e. shirts, posters, etc. (optional)	\$2-\$10 per shirt	Most teams wear identifying “garb”
Price Range	\$640-\$840*	*plus shipping based on geography

Other expenses include: miscellaneous supplies, such as markers, paper, toner cartridges, color copies (building instructions), scissors, folders, poster board, binders, other office supplies, snacks, and travel expenses.

- Fund your team's expenses from team member contributions
- Seek a sponsor who might be from one of the parents' workplaces
- Ask local businesses related to technology to sponsor your team
- Hold a team fundraiser like washing cars, bake sale, raffle, etc.
- Connect with an organization like a youth group, school, or professional organization that can assist with the funding

### Step Seven: Work with the Team

- Meet on a regular basis with the team

- Teach your team good teamwork skills: work together, respect each other, share ideas and responsibilities (review the FLL Creed and Values: see national website)
- Make sure the kids do the work; not the coach
- For programming: practice the design process: analyze the problem, brainstorm ideas for solutions, design, build, program, test, evaluate, re-design, re-build, test again, (may do this many times) and then practice good results until they are consistent
- For project: analyze the problem; define, ask questions, research, brainstorm solutions, create a clear outline of problems-solutions, find a creative, fun way to express the project process you went through and then practice, practice, practice!
- Find a team name and motto; make it fun!

### Step Eight: Register for Indiana Qualifying Tournaments

#### **October REGISTRATION: LOCAL AND QUALIFYING TOURNAMENTS (QT) REGISTRATION**

Once you have become an official FLL team, you can attend Indiana tournaments. All teams wishing to participate in the Indiana Championship Tournament must first attend a QT to compete for a slot among the teams that will advance. For all tournament registration details see the **Indiana Championship FLL Website hosted by IPFW: [www.etcs.ipfw.edu/fll](http://www.etcs.ipfw.edu/fll)**

- Register and attend any Local Tournaments (for practice) available in your area. See tournament listings on the national and state website.
- Register by deadline dates for a Qualifying Tournament in Indiana on the Indiana website

### Step Nine: Prepare to go to local and Qualifying Tournaments (QT)

- Read thoroughly all tournament information/guidelines sent in the mail and on the tournament websites
- Read FLL Indiana Email Updates sent out periodically
- Plan for transportation, extra snacks/food, materials needed for the tournament, hotel stays if needed
- Discuss Team Spirit, Team Work, and the concept of Gracious Professionalism with your team
- Examine all the awards given and the criteria in the manual to prepare for judging
- Practice with other adults so the team feels comfortable with the judges

### Step Ten: Championship Tournament!!

#### **Nov-Dec REGISTRATION: INDIANA CHAMPIONSHIP FLL TOURNAMENT REGISTRATION**

If your team advances from a QT, you must confirm your intention to compete at the Championship Tournament within 48 hours of advancing. Qualifying teams will be given a letter at their QT with instructions on how to confirm.

**HAVE FUN!!!**

#### **SUMMARY OF THE 3 IMPORTANT REGISTRATION STEPS**

**Registration Step 1 (May-Sept): Register your team with the national FLL organization (required by deadline of September 28 (or when filled) before registering for any tournaments**

First, you must visit the national organization's website ( [www.firstlegoleague.org](http://www.firstlegoleague.org) ) to officially register your team with FLL. You will need a valid email address and will create a password to access your account. The national registration period lasts from May 1 to September 28 or when all slots are filled.

**Registration Step 2 (October): Register your team to attend an Indiana Qualifying Tournament in your area**

You should visit the Indiana Tournament website ( [www.etcs.ipfw.edu/fll](http://www.etcs.ipfw.edu/fll) ) and register your team to compete in a Qualifying Tournament. There are six tournaments to choose from across the state. Indiana Qualifying Tournament registration lasts from October 15-October 26, 2007.

**Registration Step 3 (Nov-Dec): Register your team for the Indiana Championship Tournament**

If your team advances from a QT, you must confirm your intention to compete at the Championship Tournament within 48 hours of advancing. Qualifying teams will be given a letter at their QT with instructions on how to confirm.