

# WELCOME TO THE KICKOFF!

# **CONTACT INFORMATION**

- Shannon Page
  - -FLL Coordinator at the Perot Museum of Nature and Science
  - -Shannon.Page@PerotMuseum.org -(214) 759-5929

### AGENDA

- FLL Partnerships
- Teams
- Competitions
- Season
- Resources

# FLL PARTNERSHIPS



- FIRST
- LEGO

- FIRST
- LEGO
- Perot Museum of Nature and Science

- FIRST
- LEGO
- Perot Museum of Nature and Science
- Head Referee Joe Varnell

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- LEGO
- Perot Museum of Nature and Science
- Head Referee Joe Varnell
- Regional Judge Advisor Michael Calahan

# TEAMS

### WHAT IT TAKES TO PARTICIPATE

• How do I form a team?

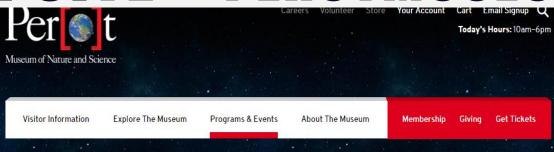
# WHAT IT TAKES TO PARTICIPATE

- How do I form a team?
- What does the team need?

# WHAT IT TAKES TO PARTICIPATE

- How do I form a team?
- What does the team need?
- What do the coaches and mentors do?

### FLLMINI SITE – PEROTMUSEUM.ORG/FLL



### FIRST LEGO. League



The Perot Museum is proud to serve as the North Texas affiliate of *FIRST* LEGO® League – a regional engineering competition that challenges students to use their creativity and technical knowledge to create robots designed to solve real-life problems

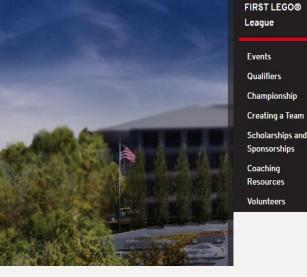
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Congratulations to our North Texas Regional Championship winners!

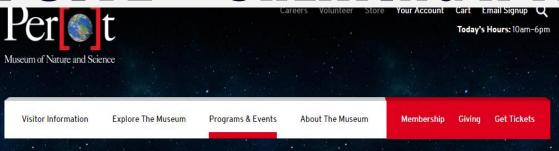
The 2017-2018 Challenge, HYDRO DYNAMICS, will have official details released on August 29, 2017 – but in the meantime, check out this teaser and upcoming related events! You can also check out the Field Setup Guide and overhead map photos here!







### FLL MINI SITE – CREATING A TEAM



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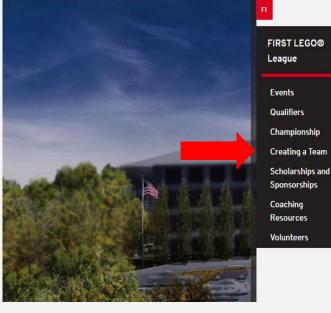
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# FLLMINISITE – CREATING A TEAM



Visitor Information Explore The Museum Programs & Events

About The Museum Membership

### FIRST LEGO<sub>®</sub> League



Today's Hours: 10am-6pm

Giving Get Tickets

### **Creating a Team**

FIRST LEGO® League

#### Events

Qualifiers Championship

#### ireating a Team

Scholarships and Sponsorships Coaching Resources

Volunteers

If you're interested in forming a FLL team, here's how it works:

FLL teams consist of anywhere from 2 to 10 members, ages 9-14. While most teams are founded by schools, many are also independently run through Boy and Girl Scout troops, science and technology clubs, homeschool groups, other outreach organizations, or just groups of friends!

The Perot Museum of Nature and Science is the Operational Partner for FLL in North Texas. We oversee official FLL events in the region and work to spread the word of FLL. We cannot, however, assist with team creation or



management. We recommend the following course of action for anyone interested in getting involved with an FLL team:

#### CETTING INVOLVED WITH A TEAM



### <u>FLL MINI SITE – CREATING A TEAM</u>



#### [GETTING INVOLVED WITH A TEAM]

Contact the child's school and see if they already have an FLL team that has an available spot.
 If the child's school does not have a team, encourage them to start one.

3. Offer to become a team coach. There are great resources for coaches here.

4. Need help locating an FLL team in your area? Try FIRST's team-matching system, TeamUp.

#### [HOW TO REGISTER]

Once you have a group of students and a coach, you're ready to begin the season - all you need to do is register!

To register to compete in official FLL Tournaments, you must first register with *FIRST* by visiting the *FIRST* LEGO® League website. Registration takes place each year between May and September.

1. Visit the FIRST LEGO® League website to start a team.

2. Read all of the instructions carefully and click on "Register" in the gray box.

Follow the instructions to create an account and begin the registration process. Please note, as of this year, all teams
will need to list two coaches/mentors/adult contacts who must pass a background check before registration can be
confirmed.

 Once both adults have passed the background check, FIRST will send you instructions on how to order your Challenge Set.

#### Costs or required items

S225 per team: fee to register through FIRST. Registration through FIRST is required to participate in any official local, national, or international events, which may have additional costs.

S75 + shipping: cost of Field Set-up Kits. These consist of the Lego pieces and field mat that the robots will use in the Robot Game and Robot Design judged session.

\$~250-\$1000+: cost of NXT or EV3 robots, depending on source and "bells and whistles." Either robot can be used for competitions

Part pricing list

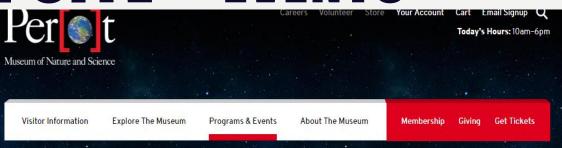


# FLL SEASON

### • Clinics

- Clinics
- Scrimmages

### FLL MINI SITE – EVENTS



### FIRST LEGO<sub>®</sub> League



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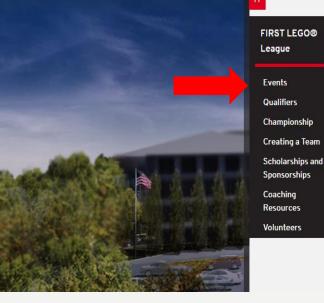
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# FLL MINI SITE – EVENTS

FIRST LEGO®

Qualifiers

Championship

**Creating a Team** 

Scholarships and

Sponsorships Coaching

Resources

Volunteers



### Season Events

Dates are kept current but are subject to change. Information is added as it becomes available.

#### [2017-2018 CHALLENGE: HYDRO DYNAMICS]

On your mark, get set, flow! Drink in the 2017/2018 HYDRO DYNAMICS season and learn all about water – how we find, transport, use, or dispose of it. In the 2017/2018 FIRST® LEGO® League Challenge, students age 9 to 16\* from 80 countries will make a splash with HYDRO DYNAMICS. What might become possible when we understand what happens to our water?

Details about the upcoming season will be posted on August 29, 2017. In the meantime, be sure to check out the official FIRST teaser video!

#### Official FLL Events

FLL First Round Qualifiers: December 2–16, 2017
 FLL Second Round Qualifiers: January 13–21, 2018
 FLL Regional Championship: February 3rd, 2018

#### 2017-2018 FLL-RELATED EVENTS

Upcoming Events:

#### FLL Kick Off/Team Dynamics Clinic

September 9, 2017, 1:30-4:30 pm Williams High School Pre-Register here!

FLL Kick Off/Team Dynamic Clinics are intended for coaches and mentors ONLY.





### FLL MINI SITE – EVENTS

[2017-2018 FLL-RELATED UPCOMING EVENTS]

#### FLL Kick Off/Team Dynamics Clinics

 September 16, 2017, 1-5 pm Fellowship Christian Academy

- Pre-Register here
- September 16, 2017, 10am-12:30pm
   Benbrook Public Library
   Pre-Register here.

FLL Kick Off/Team Dynamic Clinics are intended for coaches and mentors ONLY.

#### This event is free!

What are the Kickoffs?

- These are introductory meetings/presentations where we go over many things you'll need to know about participating in FLL this season.
- There are at least two Kickoff sessions each season. Each coach/mentor only needs to go to one, and it doesn't matter which one. Rookie and veteran coaches are welcome at both events.
- These are HIGHLY RECOMMENDED, especially for new coaches/mentors.
- We will go over exactly how the events and competitions run (rules, policies, what to expect), and there will be Robot Game tables and fields set up with experts there to explain the Robot Game missions and rules.
- It's a great opportunity to meet the North Texas FLL community, get your questions answered in person, and figure out exactly what will be happening for us this season.

#### UTD Clinic - Chassis Building and Attachments

September 23, 2017 9am - 12pm The University of Texas at Dallas Registration is required.

This clinic is for coaches/mentors and up to TWO (2) team members.

#### This event is **free!**

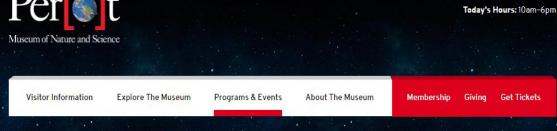
UT-Dallas Science and Engineering Education Center (UTD/SEEC) will be hosting a clinic on FLL chassis building and attachments. The clinic will start with an overview of the LEGO building pieces most commonly used for building FLL robots, and then present the design principles important to developing a good chassis and efficient Robot Game execution. The clinic will then demonstrate a wide variety of attachment types and mounting options.





- Clinics
- Scrimmages
- I<sup>st</sup> Round Qualifiers

### FLINNISTE - QUALIFIERS Per t t - Careers Volunteer Store Your Account Cart Email Sig Today's Hours:



### FIRST LEGO. League



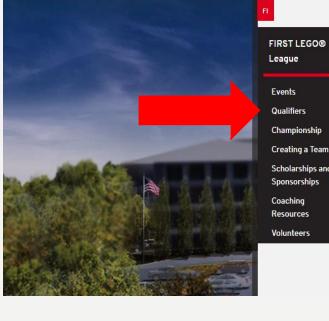
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# FLL MINI SITE - QUALIFIERS

Visitor Information Explore The Museum Programs & Events About The Museum

**Get Tickets** Membershi

### FIRST LEGO. League

### Qualifiers

North Texas.

FIRST LEGO® League

Events

Championship **Creating a Team** 

Scholarships and Sponsorships Coaching Resources

Volunteers

There are 12 First Round Qualifiers held in December. Each team can only participate in 1 First Round Qualifier. Teams who score highly in the Robot Game matches AND rank highly in ALL judged categories will be eligible to advance to the Second Round qualifiers and/or directly to the Regional Championship. All competitions are held at various schools around

In order to participate in official competitions, you must register your team with FIRST at the beginning of the season.

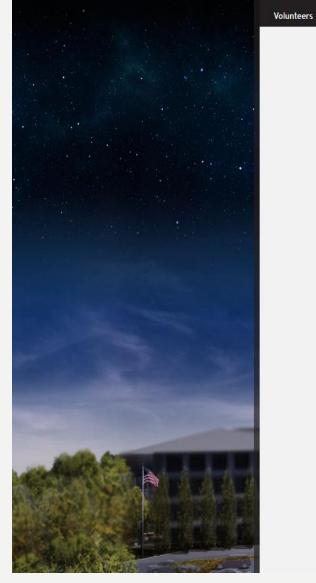


#### 2017-2018 SEASON

On your mark, get set, flow! Drink in the 2017/2018 HYDRO DYNAMICS season and learn all about water - how we find, transport, use, or dispose of it. In the 2017/2018 FIRST® LEGO® League Challenge, students age 9 to 16\* from 80 countries will make a splash with HYDRO DYNAMICS. What might become possible when we understand what happens to our water?



# FLLMINISITE - QUALIFIERS



#### [2017-2018 SEASON]

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Details about the upcoming season will be posted on August 29, 2017. In the meantime, be sure to check out the official FIRST teaser video!

#### **First Round Qualifiers**

- December 2
  - Allen High School
  - Parish Episcopal School
  - Fellowship Christian Academy
  - Hillsboro Junior High
- Dallas ISD
- December 9
- Burleson High School
   Braswell High School
   Plano ISD
- Nolan Catholic High School
- December 16
  - Bethesda Christian School
     Plano ISD
  - Heritage Middle School

#### Second Round Qualifiers

- January 13
  - Grand Saline High School
- January 20
  - Grand Saline High School



### I<sup>st</sup> Round Qualifiers

### December 2<sup>nd</sup>

- Allen High School
- Parish Episcopal School
- Fellowship Christian Academy
- Hillsboro Junior High
- Dallas ISD

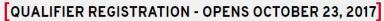
### **December 9**<sup>th</sup>

- Burleson Junior High
- Braswell High School
- Plano ISD
- Nolan Catholic High school

### December 16<sup>th</sup>

- Bethesda Christian School
- Plano ISD
- Heritage Middle School

### FLL MINI SITE - QUALIFIERS



- Qualifier locations are first come, first served. Once a location is filled it will be removed as an option. Teams CANNOT change their qualifying site after registration.
- Registration is not complete until payment is received. Payments can be made by credit card, check, or purchase order.
- If paying by credit card, teams may register online. Payment by credit card is strongly recommended and the best way to ensure your spot is held.
- If paying by check or purchase order, teams must call the Reservation line to register with payment ready to be made. After giving details to Reservations, you must mail in your check or purchase order within 7 days. You may mail your check in early but this does not reserve your spot; you must all Reservations to complete your registration.
- Include your team's name and number as well as the coach's name on your check.
- An invoice can be generated in advance by contacting fll@perotmuseum.org.
- Only full and completed registration including payment reserves your spot. Payment must be received by 11:59 p.m. on November 17, 2017 or your team will not be able to compete.
- Qualifier fees are nonrefundable.

To register for a Qualifier, teams must already be registered with FIRST. Qualifier registration will be handled through the Perot Museum of Nature and Science.

Need an invoice? Email fll@perotmuseum.org with your team name, team number, and billing information.

#### You will need the following information available to register:

- Team number
- Team name
- Coach's name, email and phone number (we will communicate with you via email)
- Payment

#### [FAQS]

#### How Much Does a Qualifier Cost?

\$125.00. Qualifier registration fees are separate from the registration fee paid to FIRST when a coach registers their team. Competition registration fees will be due to the Perot Museum upon registration for the competitions.

#### What Goes on at Qualifiers?

Each qualifier is a one-day-long event where teams will demonstrate what they've built, programmed, researched, and learned in four categories of competition:

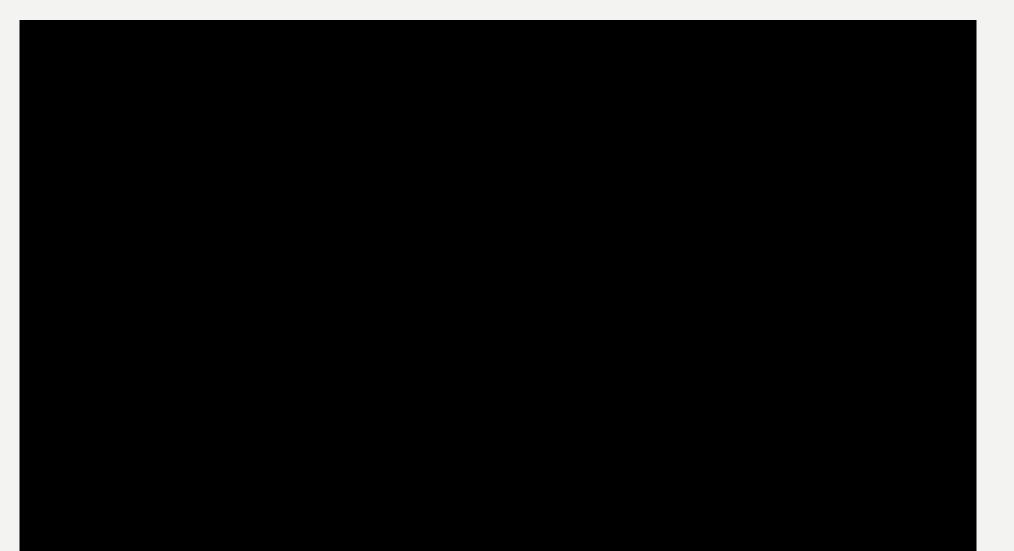


# **QUALIFIER REGISTRATION**

- First Come; First Served
- Registration is not complete until payment is received.
- Payment by check, PO, or credit card by phone.
- Payment by credit card only by website.
- Have payment ready to go request and invoice <u>fll@perotmuseum.org</u>
- Payment must be received by November 17<sup>th</sup>
- REGISTRATION OPENS OCTOBER 23rd at 10:00 a.m.

- Clinics
- Scrimmages
- I<sup>st</sup> Round Qualifiers
- 2<sup>nd</sup> Round Qualifiers Grand Saline High School
  - -January 13th
  - -January 20th

- Clinics
- Scrimmages
- I<sup>st</sup> Round Qualifiers
- 2<sup>nd</sup> Round Qualifiers
- Championship Parish Episcopal School
  - -February 3rd



- I<sup>st</sup> Round Qualifiers Area Schools
  - December 2<sup>nd</sup>
  - December 9<sup>th</sup>
  - December 16<sup>th</sup>
- 2<sup>nd</sup> Round Qualifiers Grand Saline High School
  - January 13<sup>th</sup>
  - January 20<sup>th</sup>
- Championship Parish Episcopal School
  - February 3<sup>rd</sup>

# COMPETITIONS

• 3 Judged Categories

- 3 Judged Categories
  - -Robot Design
    - Robot Design Executive Summary

### **ROBOT DESIGN EXECUTIVE SUMMARY**

#### Robot Design Executive Summary (RDES)

**LEGO** To help the Robot Design Judges quickly and consistently learn about your robot and the design process used, we are requiring a short presentation. An "executive summary" is often used by engineers to briefly outline the key elements of a product or project. In other words, the purpose of the RDES is to give the Robot Design Judges an outline of your robot and all that it can do. The RDES is intended to help your team consider in advance the most important information to share with the Judges. What you chose to share will enable the Judges to effectively evaluate your team and provide more helpful feedback.

Your team is free to determine how much time you invest, but realistically it should only take a few hours to develop and practice the RDES. The RDES is NOT intended to be as extensive or time consuming as your Project.

Your team will present your RDES at the beginning of your Robot Design judging session. The entire presentation, including the trial run, should not take any longer than four (4) minutes. Following your Robot Design presentation the Judges will pose questions for your team to answer. You are not required to provide a written version of the RDES to leave with the Judges.

Basic Outline: The RDES should include the following elements: Robot Facts, Design Details, and a short Trial Run.

<u>Robot Facts</u>: Share with the Judges a little bit about your robot, such as the number and type of sensors, drivetrain details, number of parts, and the number of attachments. The Judges would also like to know what programming language you used, the number of programs and the amount of memory used by each program, and your most consistently completed mission.

#### Design Details:

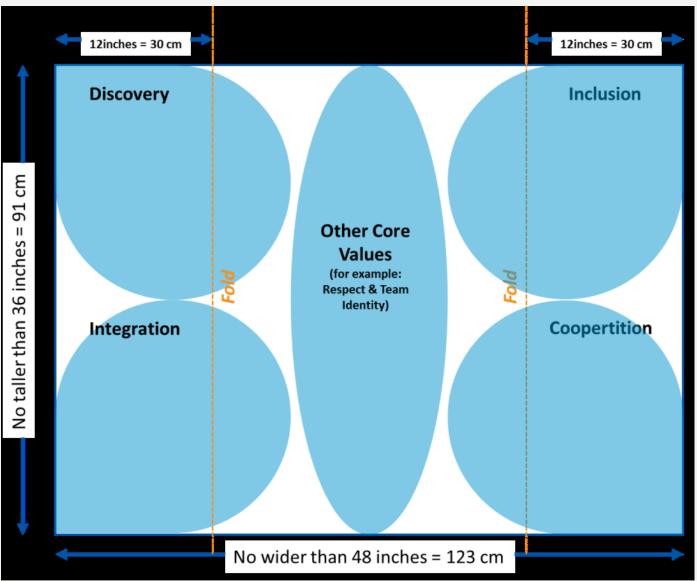
- Fun: Describe the most fun or interesting part of robot design as well as the most challenging parts. If your
  robot has a name, who chose the name and why. If your team has a fun story about your robot please feel
  free to share.
- Strategy: Explain your team's strategy and reasoning for choosing and accomplishing missions. Talk a
  little bit about how successful your robot was in completing the missions that you chose. Judges may like to
  hear about your favorite mission and why it is your favorite.
- Design Process: Describe how your team designed your robot and what process you used to make improvements to your design over time. Briefly share how different team members contributed to the design and how you incorporated all the ideas.
- 4. Mechanical Design: Explain to the Judges your robot's basic structure, how you make sure your robot is durable and how you made it easy to repair or add/remove attachments. Explain to the Judges how the robot moves (drivetrain), and what attachments and mechanisms it uses to operate or complete missions.
- Programming: Describe how you programmed your robot to ensure consistent results. Explain how you
  organized and documented your programs, as well as, mention if your programs use sensors to know (and
  ensure) the location of the robot on the field.
- Innovation: Describe any features of your robot design that you feel are special, different or especially clever.

<u>Trial Run</u>: If a Robot Game table is available, demonstrate the operation of your robot for the Judges performing the mission(s) of your choice. Please do not do an entire robot round; time will be needed for Judges to ask questions of your team.

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- 3 Judged Categories
  - -Robot Design
  - -Core Values
    - Core Values Poster

## **CORE VALUES POSTER**

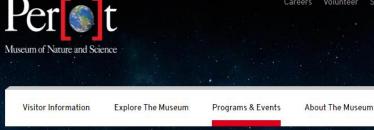


- 3 Judged Categories
  - -Robot Design
  - -Core Values
  - -Project

- 3 Judged Categories
  - -Robot Design
  - -Project
  - -Core Values
- Robot Game

# RESOURCES

### FLL MINI SITE – COACHING RESOURCES



ut The Museum Membership

#### FIRST LEGO. League



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Today's Hours: 10am-6pm

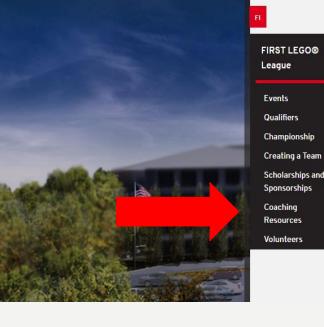
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## FLL MINI SITE – COACHING RESOURCES

#### FIRST LEGO<sub>®</sub> League



#### **Coaching Resources**

FIRST LEGO® League

#### Events Qualifiers Championship **Creating a Team** Scholarships and Sponsorships

Volunteers



2018 FLL season: HYDRO DYNAMIC is coming together and will officially begin August 29th with the release of the Challenge details. Good luck to all our North Texas teams! Team registration opens in May on FLL's website until late September. The first step to participating is to register through FIRST

Headquarters. To register a team through

background check before they can register a team. Team registration is \$225 and the field kits needed to participate are \$75. You can find all the information you need, plus links to the

registration websites on our Creating a Team

FIRST, coaches will now have to pass a

Welcome new and returning coaches! The 2017-

#### Consent and Release Form

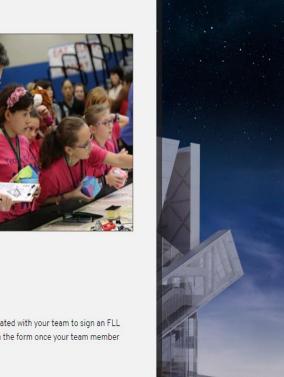
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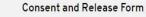
#### Season Specific Links

These links will be live as they become available:

Coaches Handbook



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- Consent Form (English) and Consent Form (Spanish)

#### Season Specific Links

These links will be live as they become available:

#### Coaches Handbook

- Challenge Document
- Challenge Guide
- Challenge Updates
- Mission Model Build Instructions
- Field Set Up Guide
- Field Overview Photo
- Core Values
- FLL Table Build Instructions
- Rubrics

#### **Additional Websites**

- Webinars from FIRST
- Roboplex
- Fellowship Christian Academy Robotics and Engineering
- North Texas FLL Google Group

For answers to FLL questions and details about the North Texas region, please contact Shannon Page at FLL@perotmuseum.org.







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