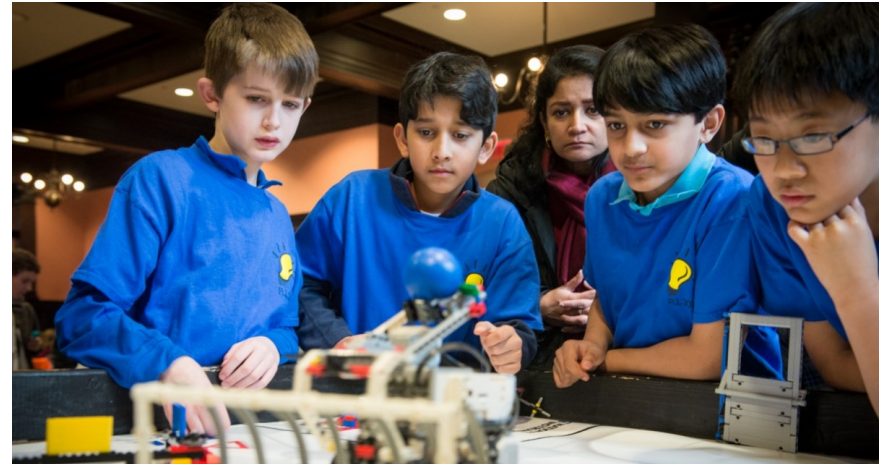


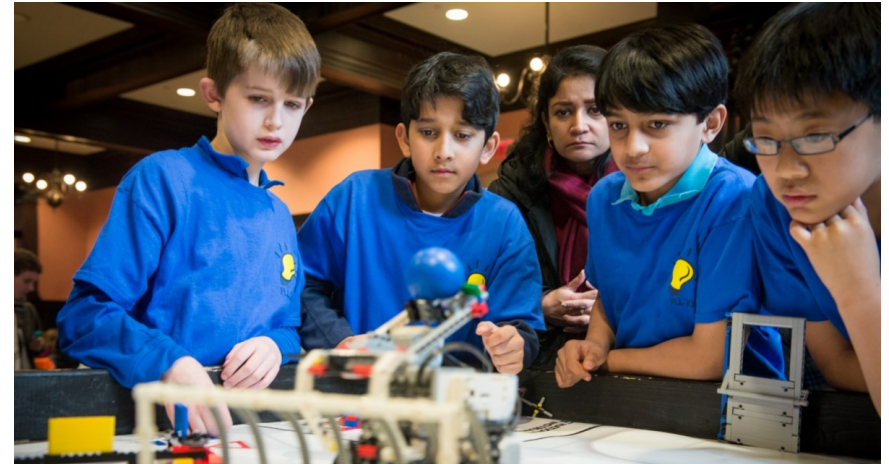
FIRST® LEGO® League



Welcome to New Coach Training



FIRST® LEGO® League



FLL 101



THANK YOU!!!!

FMA-FLL FIRST LEGO League relies on
the strength of coaches and volunteers
to create a rewarding experience
for all students in the region.



***FIRST*® Is...**

A Suite of Hands-On, STEM Learning Programs

***FIRST* LEGO LEAGUE**



GRADES
PreK-8

AGES
4-16

***FIRST* TECH CHALLENGE**



GRADES
7-12

AGES
12-18

***FIRST* ROBOTICS COMPETITION**



GRADES
9-12

AGES
14-18

Through a progression of team-based robotics challenges and backed by a global network of mentors, coaches, volunteers, alumni, and sponsors, *FIRST* helps young people discover a passion for STEM and develop the skills they'll need to succeed in today's competitive workforce.

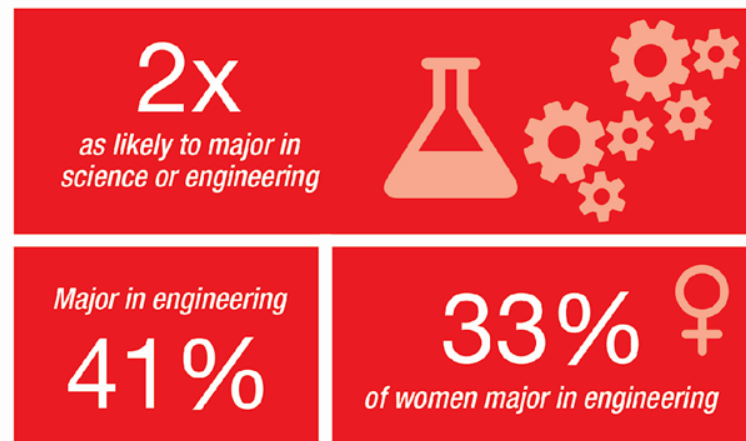
FIRST® Impact: More Than RobotsSM

- ***STEM Awareness, Skills and Intent***
 - Increase the number of students who pursue post-secondary education and careers in STEM-related fields and industries
- ***Innovation and Entrepreneurship***
 - Inspire youth to become leaders and innovators in their field and society
- ***21st Century Work-Life Skills***
 - Enable young people to develop valuable, transferrable, real-world skills, including: teamwork, leadership, creative problem solving, critical thinking, time & project management, and communication/presentation skills

FIRST® IMPACT

10 years of evaluation data indicates that with participation in **FIRST®** team members are:

STEM MAJOR CITED BY FIRST PARTICIPANTS



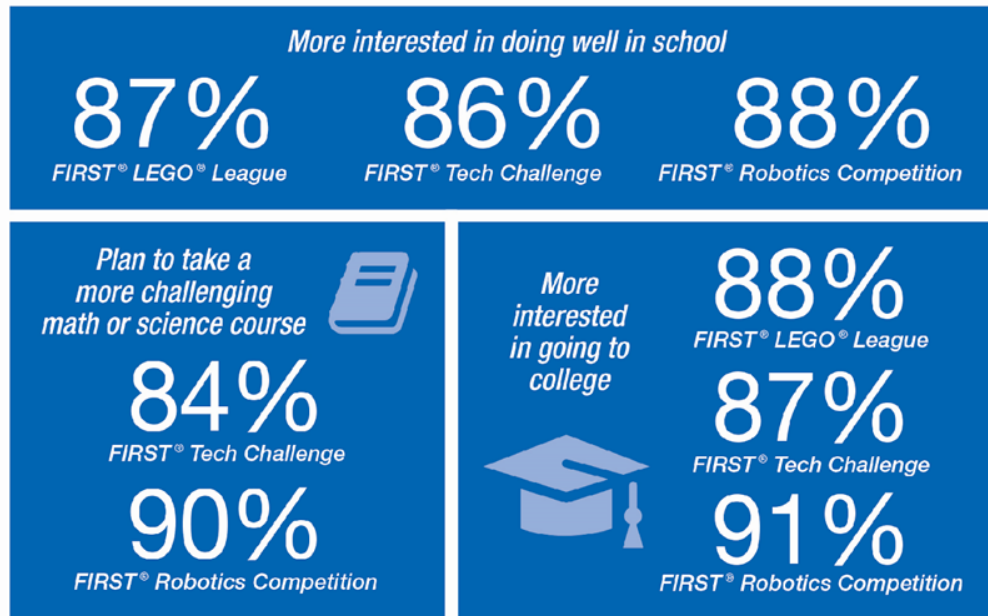
Source: Brandeis University, 2005 Evaluation of FIRST® Robotics Competition Alumni

21ST CENTURY WORK-LIFE SKILLS GAINED BY FIRST PARTICIPANTS



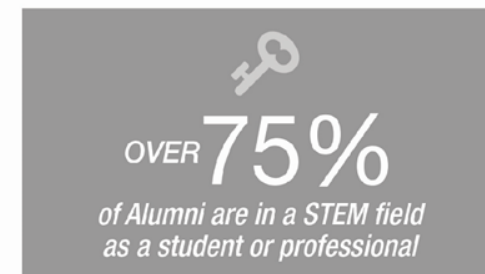
Source: Brandeis University, 2011 FIRST® Tech Challenge – FIRST® Robotics Competition Evaluation and 2013 FIRST® LEGO® League Evaluation

SCHOOL ENGAGEMENT INCREASES FOR FIRST PARTICIPANTS



Source: Brandeis University, 2011 FIRST® Tech Challenge – FIRST® Robotics Competition Evaluation and 2013 FIRST® LEGO® League Evaluation

FIRST ALUMNI IN STEM CAREERS



Source: FIRST, 2011 Survey of FIRST® Robotics Competition and FIRST® Tech Challenge Alumni



FIRST® At-a-Glance

460K+

students participating
in 2016-2017

230K+

Mentors, Coaches, Judges
& Volunteers in 80+
countries

17M+

Volunteer hours served
in 2016-2017

\$50M+

scholarship opportunities
from nearly 200 providers

>2,600

official events worldwide

65K+

participants at annual
FIRST® Championship





**FIRST
LEGO
LEAGUE**

CHALLENGE

- **FIRST**

- **A GLOBAL ROBOTICS COMMUNITY PREPARING YOUNG PEOPLE FOR THE FUTURE**

- **FIRST Mid-Atlantic**

- Local 501(c)(3) non-profit licensed to run FIRST programs in New Jersey, Delaware and Eastern Pennsylvania

- **FMA-FLL**

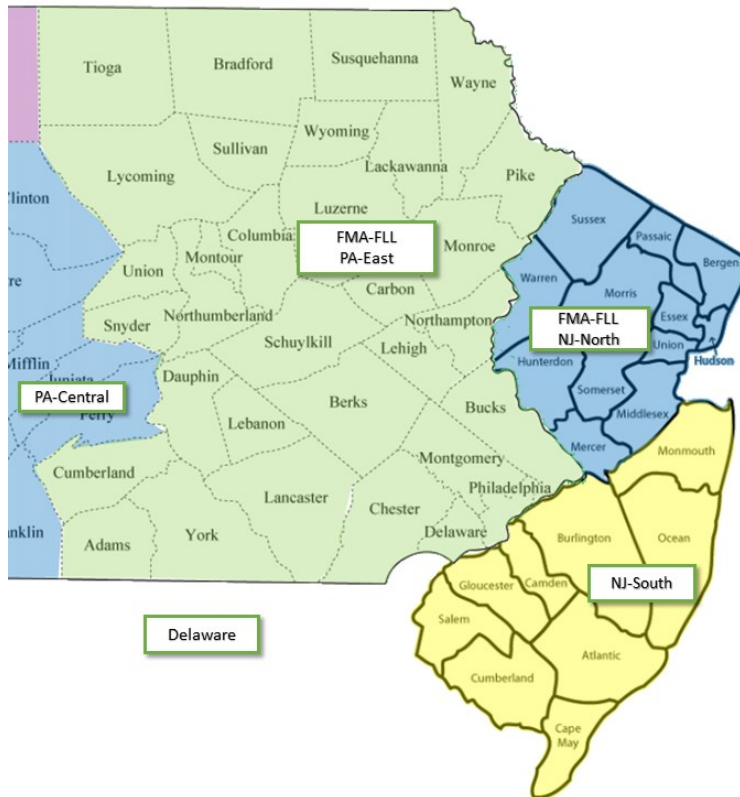
- FIRST Lego League program run by FIRST Mid-Atlantic
Frank Larkin – FLL Director
flarkin@midatlanticrobotics.org
Ernie Diccico – NJ-North FLL Director
ediccico@firstpartners.org



FIRST
MID-ATLANTIC

Our Region...

FMA-FLL consists of PA-East and NJ-North



Surrounding Regions Include:

- **FMA-FLL PA-East**
 - Frank Larkin
 - FLL Director
- **FMA-FLL NJ-North**
 - Ernie DiCicco
 - NJ-N FLL Director
- **New Jersey - South**
 - Eric Milou
- **Delaware**
 - Matthew Bobrowsky
- **Pennsylvania - Central**
 - Sarah Cox





FIRST[®]
LEGO[®]
LEAGUE

EXPLORE

- **INTRODUCES 6 TO 8 YEAR-OLDS** to the fun of science and technology
- **MINI CHALLENGE** based on the annual FLL Theme
- **EXPLORE**, investigate, design, and build a model made with LEGO bricks and moving parts
- **CREATE** A “Show Me” poster depicting the team’s experience
- **LEARN** from and interact with adult mentors



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CHALLENGE



Helps children, ages 9 to 14, discover the fun in science and technology while building self-confidence, knowledge and life skills

"I want to build things nobody else has even thought of yet."

Charles Peterson, FLL Team Member (10 years old)





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LEAGUE

CHALLENGE

MASTER
PIECESM



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CHALLENGE

This year's FIRST LEGO League Challenge is called MASTERPIECESM.

Welcome to MASTERPIECESM!

The children will explore how people share their hobbies and interests in creative and captivating ways. They will learn about different places where people share their talents or go to enjoy a show. Experts from a variety of backgrounds are involved in every step of putting on a show from stage managers to performers.

And it starts here, with you.





CHALLENGE

Item	Rookie year	Onwards
Registration	\$250	\$250
Challenge set (incl shipping)	\$95	\$95
LEGO Education SPIKE Prime (EV3 still usable)	\$533.90	
Practice table	\$100	
Miscellaneous (Flare, Snacks, Boxes)	\$100	\$100
T-shirts	\$120	\$120
Qualifier Registration	\$100	\$100
Championship Reg. (if team qualifies)	\$125	\$125
Presentation supplies	\$50	\$50
Total	\$1450	\$840



FMA-FLL Team Information

- **FIRST Mid-Atlantic Website**
[FLL Challenge Team Info](#)
gathers resources from around the Web.
- ✓ Coaches Required Reading
- ✓ Teams Required Doc.
- ✓ FMA-FLL Participation & Reg.
- ✓ Coach Training
- ✓ FLL Project
- ✓ MAR FLL Challenge Tools
- ✓ Spike Prime





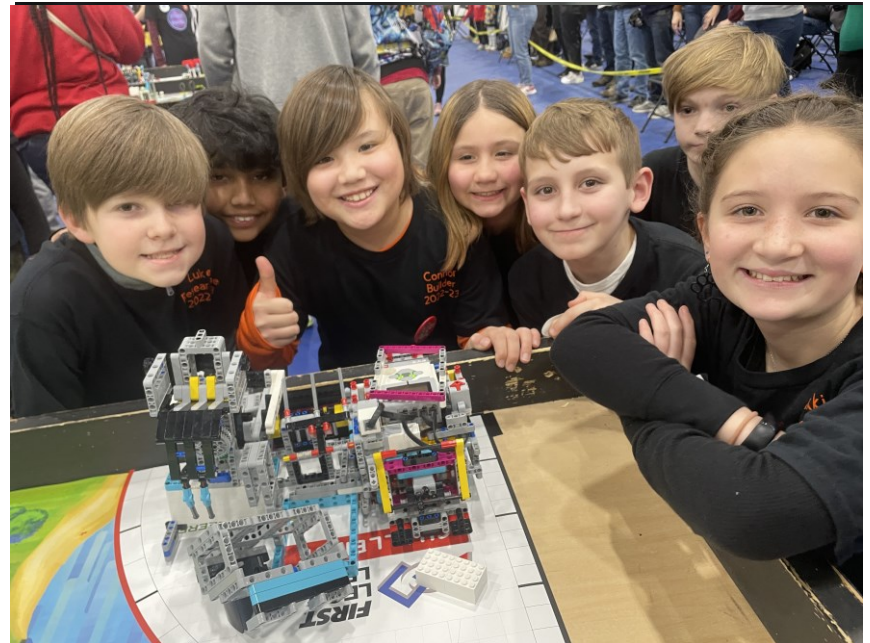
CHALLENGE

FIRST Season Information

Single Launch Point for all information:

[FIRST Season Page](#)

- ✓ Scroll down to Season Resources
- ✓ Various Challenge Videos
- ✓ Rubrics help the judges deliberate for awards and provide feedback to teams
- ✓ Awards depends on the tournament size.
- ✓ Mission Model Building Instructions
- ✓ Judging Workflow
- ✓ Participation Rules
- ✓ Robot Game Rulebook
- ✓ Table Build Instructions
- ✓ Challenge Updates (Very important)
- ✓ Think Space Instructions





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LEAGUE**

CHALLENGE



MASTERPIECE Playing Field



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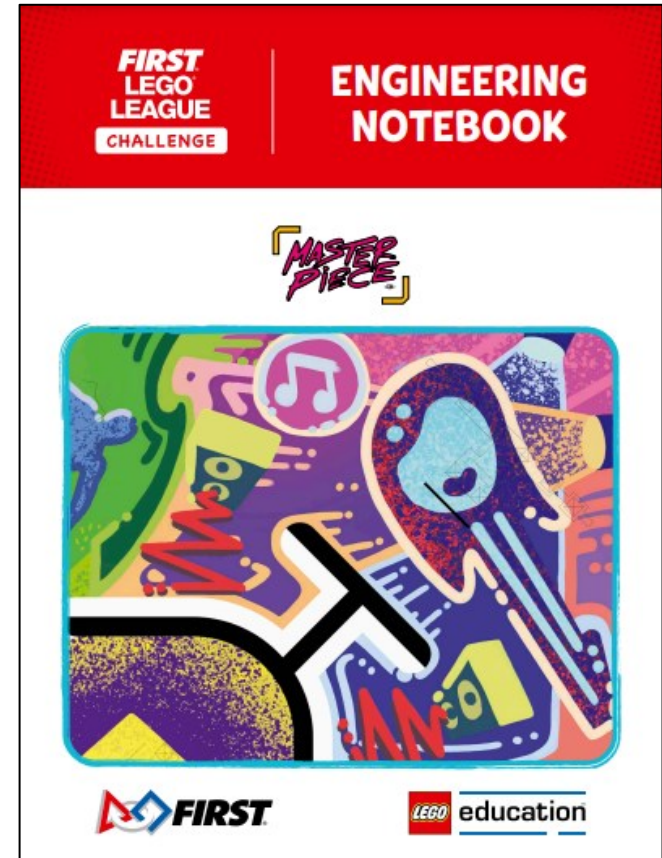
CHALLENGE

Engineering Notebook

Notebook designed to get your students to record their ideas. Can be used to demonstrate the process to judges. Each registered team will have access to download these.

Note: This is a Guide, use it as you see fit.

Available on Thinkscape Portal

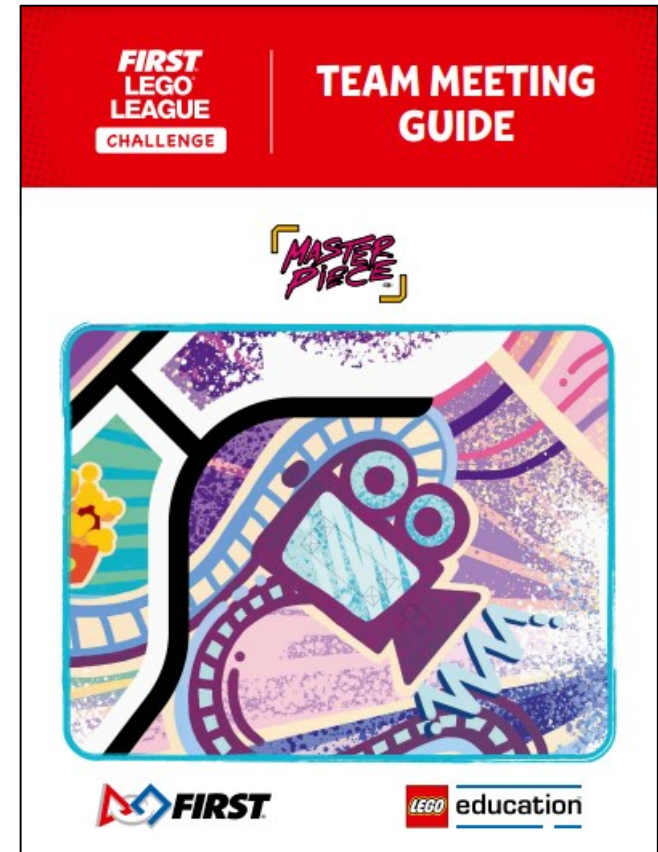


Team Meeting Guide

This guide will make suggestions and structure for 12 team sessions. These are broken up into Robot and Innovation Project.

Note: This is a Guide, use it as you see fit.

Available on Thinkscape Portal





CHALLENGE

Robot Game Rulebook

This is a guide to the rules for the game. It will help your students to be sure they know where to get all the rules and how to use them.

Available on Thinkscape Portal





CHALLENGE

FMA PA-East/NJ-North Challenge Season

Date	Event
May	Team Registration Opens (with FIRST not FMA-FLL)
August 1 st	Challenge Released (FIRST FLL Website)
Sept. – Dec.	Weekly Coaches Questions Call
Coach Trainings	Zoom call in Sept. recorded and available on FMA-FLL website
October 9th	FMA-FLL Regional Challenge Registration Opens (FMA FIRST LEGO League Website)
NJ-North PA-East	RQTs November - December RQTs December – January
NJ-North PA-East	Championships December 10 Championships Late January





CHALLENGE

What is an FLL Challenge Team?

- 2 to 10 Kids ages 9 through 14 (we can discuss outliers)
- 2 coaches (required) (FIRST YPP Background Completed)
- Hold meetings an average of 2-3 days a week for 2 hours per meeting (maybe weekends as you near competitions)
- 3 Parts, equally important!!!
 - 1) Build and program a robot
 - 2) Do a research project
 - 3) Do it all with Gracious Professionalism
- Attend a scrimmage before your qualifier (optional)
- Attend 1 weekend Regional Qualifier Tournament (RQT)
- If qualified attend the Championship Tournament.



Regional Qualifying Tournament

- The RQT is an official FIRST FLL Challenge Tournament run by an organization recognized by FIRST Mid-Atlantic for our regions.
 - This event follows FIRST's rules for running these events
 - Many volunteers are involved including referees, tournament managers, other various positions, and finally judges.
- The RQT is usually a 1-day event (under COVID rules)
- The RQT will concern itself with all aspects of the FLL Challenge. This includes the Robot Game, the Innovation Project, and Core Values.





**FIRST
LEGO
LEAGUE**

CHALLENGE

RQT Experience

8:00am- Arrive

8:00am- Team Registration

8:30am- Coach Meeting

9:00am- Opening Ceremony

9:30am- Judging Starts

12:45pm- Lunch

1:30pm- Robot Matches Begin

3:30pm- Dancing & Award Deliberation

4:30pm- Award Ceremony

5:00pm- Done!



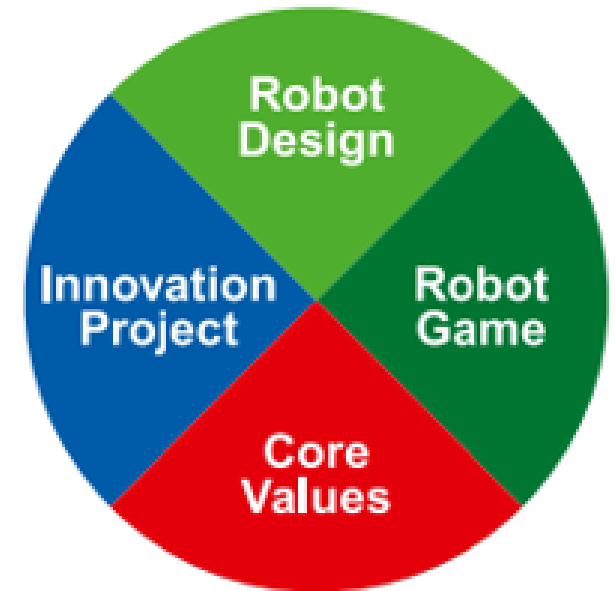
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The Pit



Judging and Scoring

- Each of these four equally weighted parts of FIRST® LEGO® League Challenge accounts for 25% of your total performance at your event.
- Your robot's performance will be evaluated during the robot game.
- The three other parts will be evaluated during a ½ hour judging session.
- Core Values should be demonstrated at the event, where you will showcase your team's amazing work on robot design and the innovation project.



Project Judging



**Note: We are now using Consolidated Judging.
All 3 disciplines will be judged in a 30-minute session.**



Robot Design Judging

**No game
field in
judging
room!!!**



**Note: We are now using Consolidated Judging.
All 3 disciplines will be judged in a ½ hour session.**



Core Values



Gracious Professionalism

***“Act in a way that
makes your
grandmother proud!”***

**Dr. Woody Flowers
Engineering, MIT**

**Note: We are now using Consolidated Judging.
All 3 disciplines will be judged in a ½ hour session.**



Robot Game



Spirit



Flare



JUST HAVE FUN!!!





CHALLENGE

Questions?

More Info at...

[FLL Challenge Team Info](#)





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CHALLENGE

Thank You

Have a great season!!!



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