

# STARTING AN FLL PROGRAM

Presented by FIRST  
Robotics Competition  
Team 6328

# 6328

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**MECHANICAL  
ADVANTAGE**

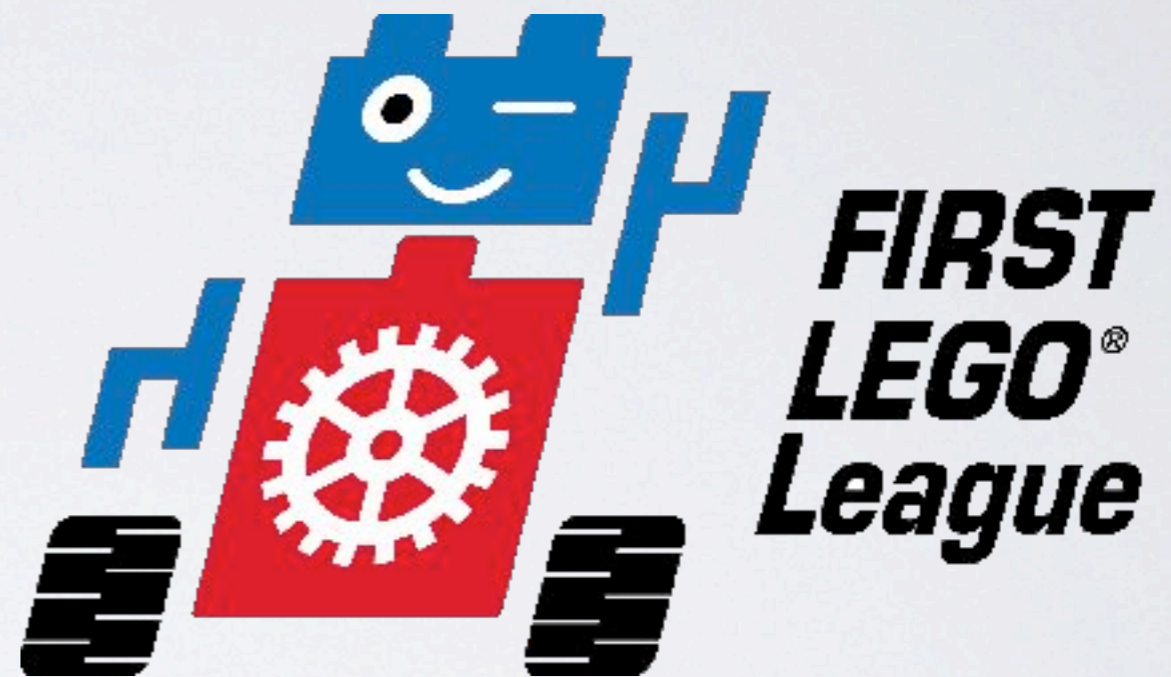
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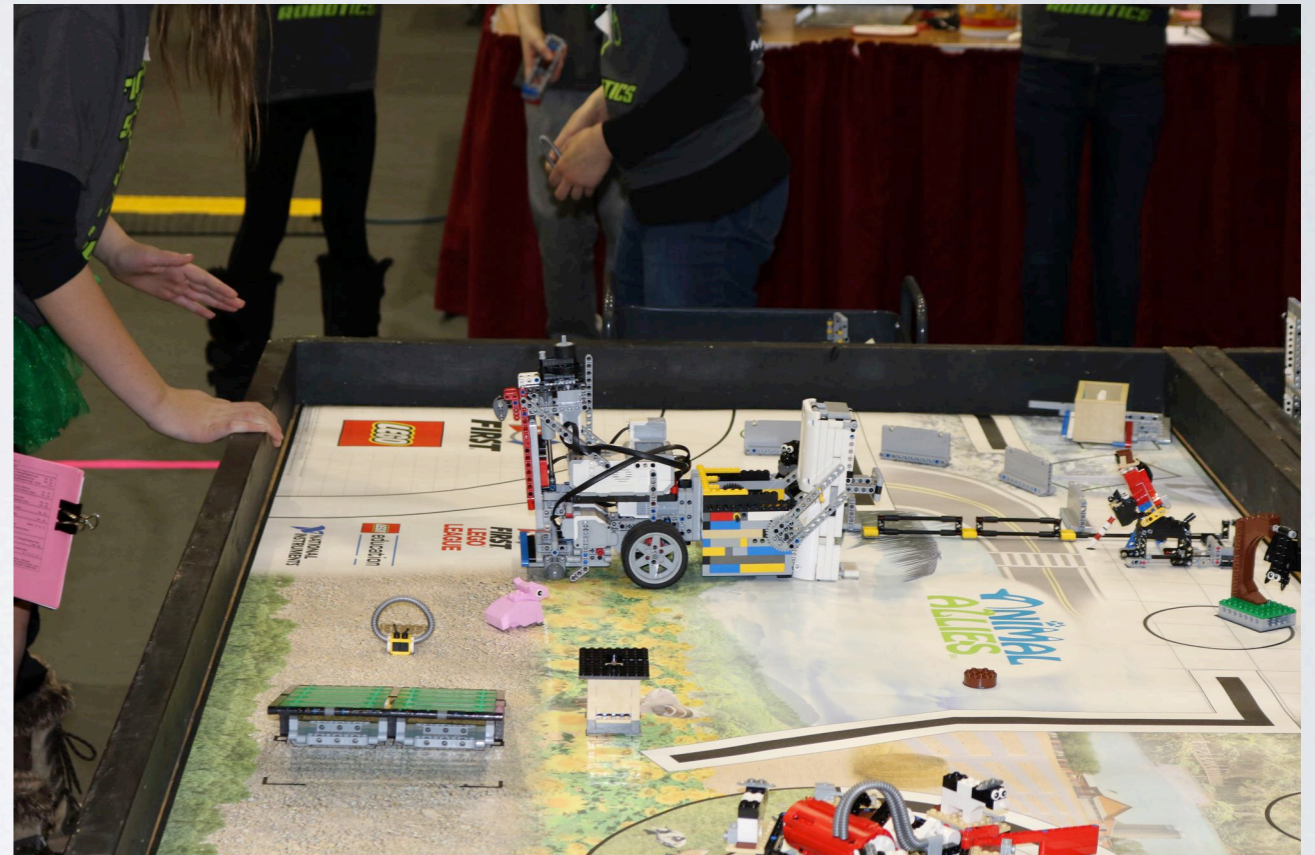
# WHAT IS FIRST ROBOTICS?

- “For inspiration and recognition of science and technology”
- Worldwide robotics competition for elementary to high school students



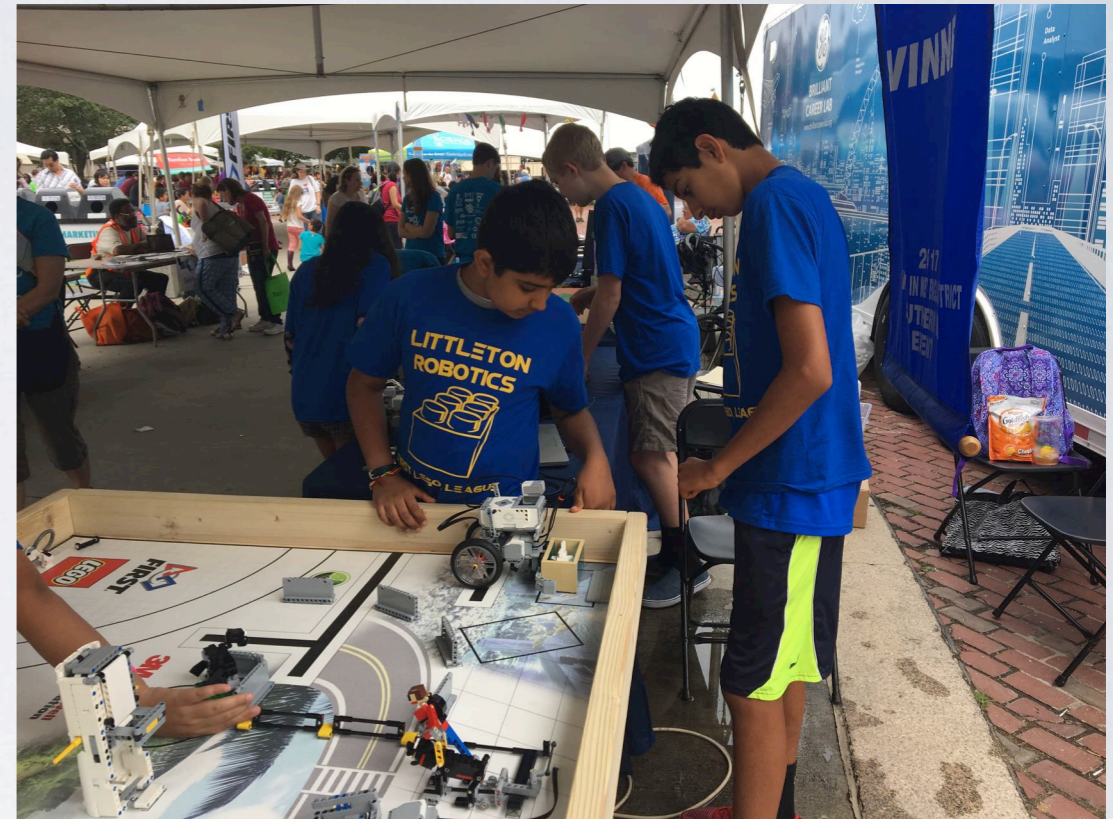
# FIRST LEGO LEAGUE (FLL)

- FLL is the elementary - middle school level competition, for students aged 9-14
- Involves building an autonomous robot and completing a research project
- Students participate on teams with 10 students maximum



# SEASON OVERVIEW

- FLL kickoff is usually in late August or early September
- Teams meet throughout the fall to work on their robots, projects and core values
- Teams attend local qualifying competitions in November and December, but the exact timing of this depends on your team's location
- Many regions host a Championship Event after qualifying events
  - Example: Massachusetts hosts State Championship event called Robonautica in mid-December



# THE PROJECT

- Students will complete a project on a particular theme

- 2017 Game: Hydrodynamics

- 2016 Game: Animal Allies



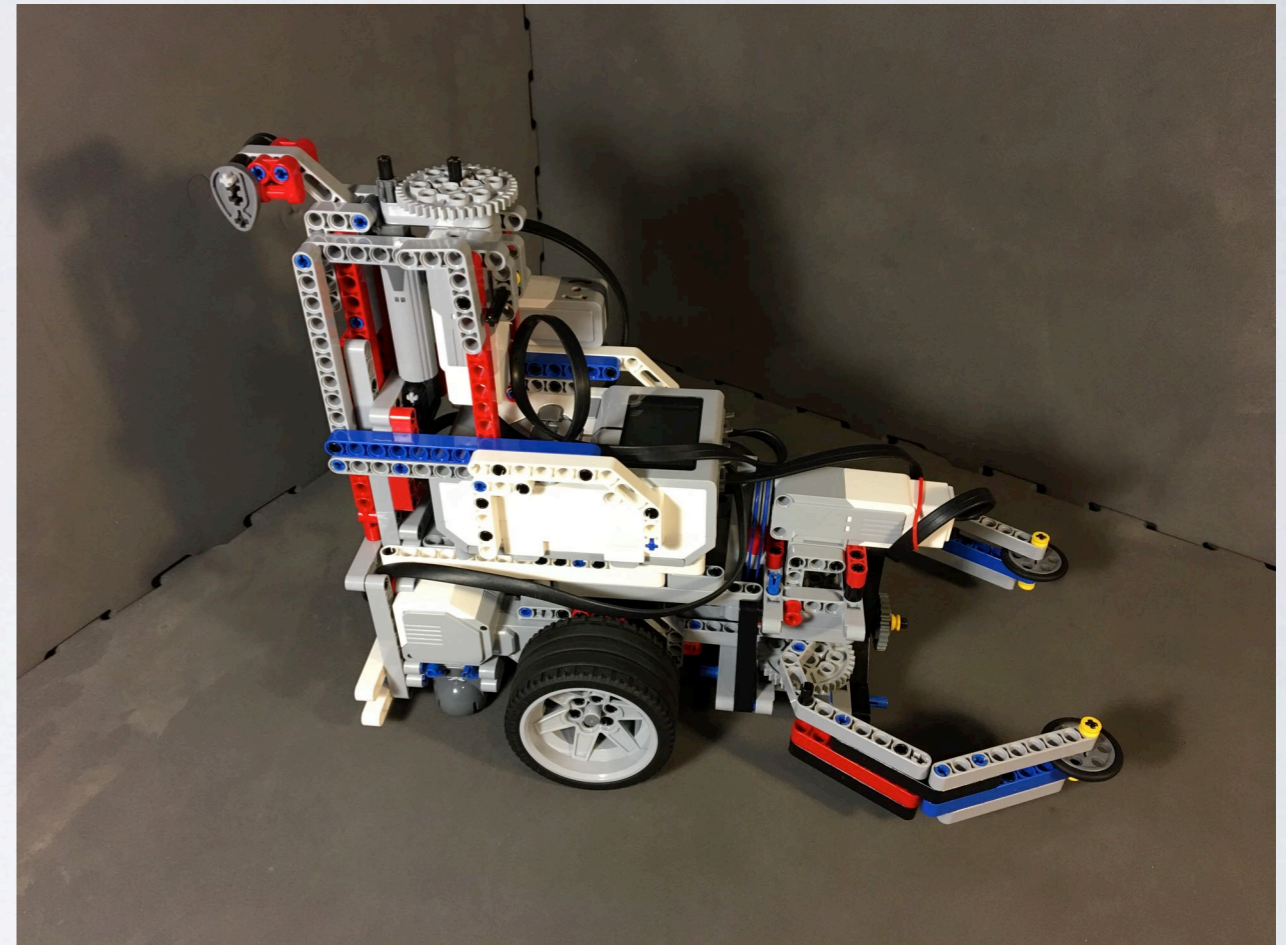
- 2015 Game: Trask Trek



- Students will complete projects that solve problems in their community
- The project has 4 main parts: identifying a problem, researching existing solutions, developing your own solution and sharing it with others
- Teams will need to prepare a 5-min presentation on their project to give during an interview at the competition events

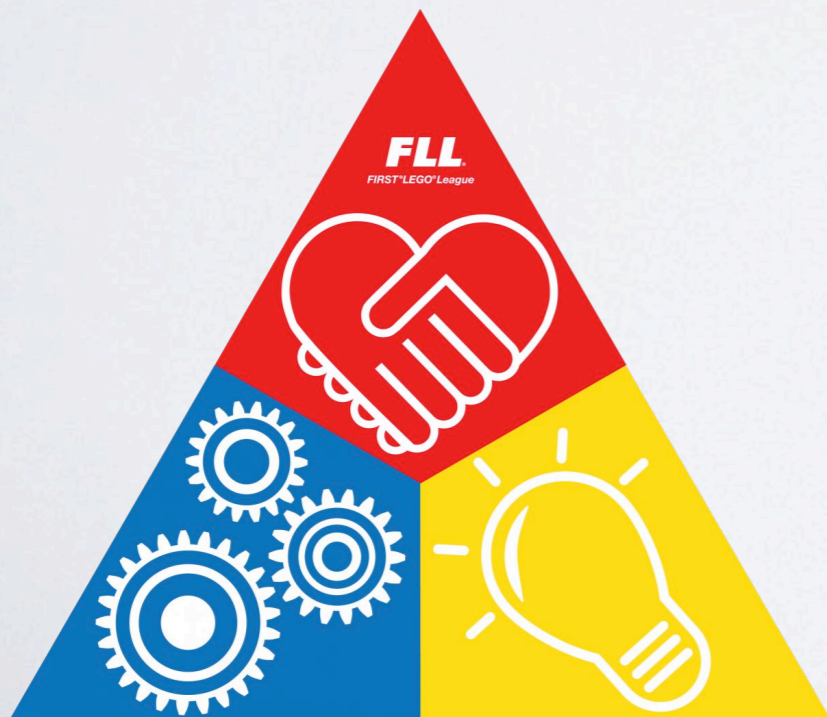
# THE ROBOT

- Game includes several missions the robot can accomplish
  - Team picks the mission they want to do
- Start with reading rules and deciding on game strategy
- Move to robot design and programming
- Teams will have 2.5 minutes to complete as many missions as they can during their competition matches
- Teams will also participate in a 10-min robot design interview with judges at the competitions











# FLL CORE VALUES

- Teams need to incorporate the FLL core values in and outside of meetings
- Teams will participate in a 10-min core values interview at competitions
- Some regions require a core values poster at competitions



## FLL Core Values

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-  We are a team.
-  We do the work to find solutions with guidance from our coaches and mentors.
-  We know our coaches and mentors don't have all the answers; we learn together.
-  We honor the spirit of friendly competition.
-  What we discover is more important than what we win.
-  We share our experiences with others.
-  We display Gracious Professionalism and Coopertition™ in everything we do.
-  We have FUN!

# TEAM STRUCTURE

- Teams can be community or school based
  - Community teams can include students from multiple towns, or can be smaller family teams
  - Can be governed by a non-profit organization
  - School teams are run out of school districts and treated like a club or sports team





# PROGRAM STARTUP COST

| Item                        | Cost                          |
|-----------------------------|-------------------------------|
| Annual Registration         | \$225 per team                |
| Mission Modules             | \$75 per field                |
| EV3 Core Set                | \$470 per kit                 |
| Field (1 time build)        | Approximately \$100 per field |
| Project Supples             | \$100 per team                |
| Miscellaneous Lego Supplies | \$200 per team                |
| Qualifier Registration      | Approximately \$75 per team   |
| <b>Estimated Total</b>      | <b>\$1,245.00</b>             |

# TEAM FUNDING

- Teams get funding in 3 main ways:
  - Grants
    - Example: BAE Systems grant for FLL teams
  - Corporate/community sponsors
  - School funding
  - Activity Fees
  - Team fundraisers
    - Car wash
    - Raffles



# MENTORS AND COACHES

- Teams will need 2 main coaches (must be 18+)
  - These adults will be the main contacts for the team
- Teams can also have mentors who assist at meetings
- Teams can have high school students from FIRST teams be mentors

# SAMPLE SEASON MEETING SCHEDULE

- Start with 2 weeknight meetings, estimated 4 hours total per week
- Add additional meetings closer to competitions

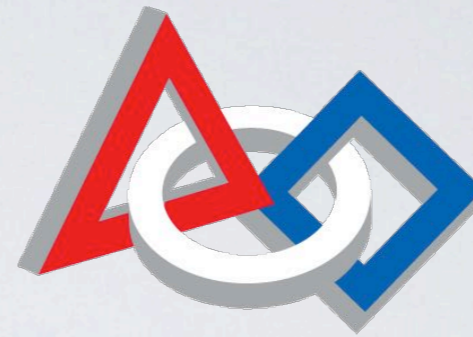


# CURRENT SEASON DETAILS

- The 2017 season game is called Hydrodynamics and is all about how we use and dispose of water
- The game missions are all water-themed and teams will be completing their projects on a topic of their choice surrounding the human water cycle



# ADDITIONAL RESOURCES



**6328**

**MECHANICAL  
ADVANTAGE**

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**FIRST Program Overview Brochure:** [https://www.firstinspires.org/sites/default/files/uploads/resource\\_library/whats\\_first.pdf](https://www.firstinspires.org/sites/default/files/uploads/resource_library/whats_first.pdf)

**FIRST Lego League Website:** <http://www.firstlegoleague.org>

**FIRST Lego League “How it Works” Flyer:** [https://www.firstinspires.org/sites/default/files/uploads/resource\\_library/FL007-HowItWorks-WEB.pdf](https://www.firstinspires.org/sites/default/files/uploads/resource_library/FL007-HowItWorks-WEB.pdf)

**Coaches Handbook:** [https://www.firstinspires.org/sites/default/files/uploads/resource\\_library/fl/hydro-dynamics/hydro-dynamics-coaches-handbook.pdf](https://www.firstinspires.org/sites/default/files/uploads/resource_library/fl/hydro-dynamics/hydro-dynamics-coaches-handbook.pdf)

**Hydrodynamics Game Manual:** <https://firstinspiresst01.blob.core.windows.net/fl/hydro-dynamics-challenge-guide-letter.pdf>

*Further questions? Don't hesitate to reach out to our team, we are happy to help.  
Send us an email at [littletonrobotics@gmail.com](mailto:littletonrobotics@gmail.com)*