



FIRST LEGO League  
2016-2017 Season Kickoff

Getting Started and Team Dynamics

Patrick R. Michaud  
Coach, FLL #27 “Republic of Pi”

# FIRST LEGO League...

OMG... Where do I start?!?

# Key materials

Team registration (TIMS)

Field setup kit (mat and mission model LEGOs)

Challenge document

Mindstorms EV3 kit

Robot game updates

## More key materials

Join the North Texas FLL Google Group

<http://groups.google.com/group/northtexasfll>

Attend kickoff events and clinics

<http://roboplex.org/fll/>

<http://perotmuseum.org/fll/>

# Getting started: Early season team activities

Review the challenge documents

Build the mission models

Learn about building with LEGO Mindstorms

Learn about Mindstorms programming

Begin project research, identify resources and contact experts

Analyze the missions and scoring

# Being a FLL Coach or Mentor

Kids come first;  
Kids do the work

## Coaches:

- Inspire and guide
- Teach new skills
- Handle logistics
- Ask questions
- Remind team of rules

## Team members:

- Decide on strategy
- Build and program
- Research
- Choose problem/solution
- Present

# 2017 Challenge: Hydro-Dynamics

Challenge document  
released August 29

## Sections:

Project

Field Setup

Robot Game Rules

Robot Game Missions



# LEGO Mindstorms EV3 Education Kit

LEGO Mindstorms EV3 “brick”

Rechargeable battery, charger

Technic LEGO components

Beams, axles, wheels,  
pegs, gears, etc.

EV3 electronics

Motors, color sensor, gyro sensor, ultrasonic sensor,  
cables

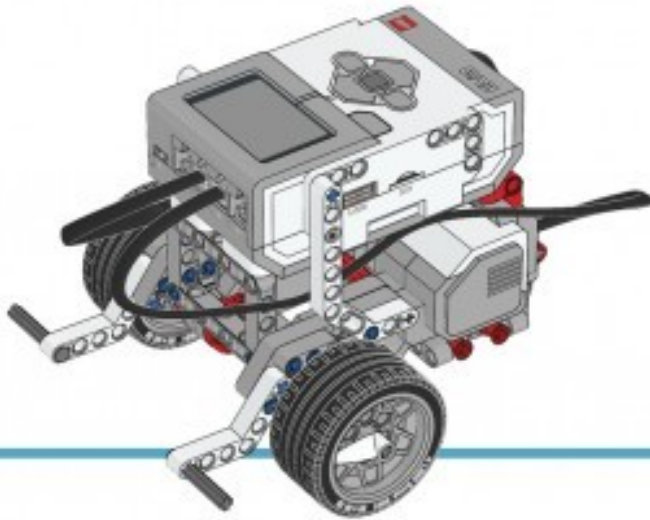




# Recommended first build

EV3 Education Kits come with instructions for building a simple “educator vehicle” robot

This robot is a good start for learning about LEGO parts, sensors, and programming



# Organizing the team

Teams may have up to 10 members

Pm prefers mid-sized teams

Designate “role leaders” / “responsible parties”

Captain

Rules / strategy

Programming

Project / research

Communication / sharing

Robot construction

Marketing

Every team has different dynamics; try to find what works best for the team

“Team” means “specialists”

## Things to do/remember

Have the team set a goal for the season

Commit to attending a qualifier, don't back out even if the team seems “not ready”

Participate in a scrimmage

Don't feel like you have to know everything beforehand

The team members will figure things out

It's really a partnership

Be a “coach”

# Team meeting dynamics

Every team is different

Recommended: Meet once or twice per week, 90 minutes (depends on your goals)

Okay to have smaller sub-group meetings

Programmers often need dedicated time with robot

Again: “Team” means “specialists”

Plan for lots of small iterations

# Pm's FLL Season timeline

## September:

Getting started, team activities, project selection, game analysis

## October:

Skill building, project research and contacts, robot chassis and experiments, solve a mission or two

## November:

Project finalization, sharing, scrimmages, solve more missions

## December:

Final tournament preparation, Qualifier events

## Other coaching tips

FLL events take place beyond the North Texas region; including Oklahoma, Central Texas, etc.

“Espionage”:

- Visit events you aren't competing at

- Visit veteran team meetings and events

“Peek behind the curtains”:

- Volunteer at an event

- Become a judge or referee

# Resources

Perot Museum FLL web pages

<http://perotmuseum.org/fll/>

Join the North Texas FLL Google Group

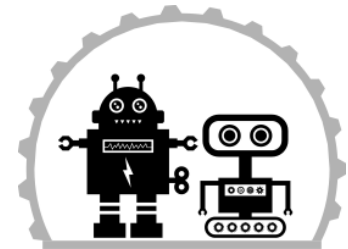
<http://groups.google.com/group/northtexasfll>

Roboplex.org

Attend kickoff events and clinics

<http://roboplex.org/fll/>

<http://roboplex.org/fll/resources/>





# Questions and Discussion