



**FIRST**  
**LEGO**  
**LEAGUE**

**CITY**  
**SHAPER**



# A Quick Look

Teamwork + Robotics + Problem Solving

Shakopee Community Education

# What is FLL?

## FIRST LEGO League

**FIRST = For Inspiration and Recognition of  
Science & Technology**

**FIRST LEGO League is an alliance between  
FIRST and the LEGO Group.**

# FLL Mission

To inspire young people to be science and technology leaders and innovators by engaging them in exciting mentor-based programs that build science, engineering, and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

In short, FLL engages students in hands-on STEM experiences to build confidence, grow in their knowledge, and develop positive learning habits.

# FLL Vision

**“To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.”**

**-Dean Kamen, Founder**

# How do they accomplish this?

**FIRST® LEGO® League (FLL) encourages students to come together to innovate and solve problems by researching a challenge and preparing a presentation that explains a solution to a real-world problem.**

**Students meet with their team weekly to work on their solution. Teams will design, build, program and test an autonomous robot using a LEGO® Ev3 robot and Mindstorms software.**





**Each challenge contains 3 parts:**

**The Robot Game**

**The Innovation Project**

**The Core Values**

# 1: The Robot Game

-  Teams design, build, test and program an autonomous EV3 robot to score points on a thematic playing field.
-  Points are scored by moving the robot around the field and by moving objects on the field (pushing, lifting, tossing or more) completing specific missions to earn points.
-  There are three 2.5 minute rounds.
-  “Teams are evaluated on mechanical design, programming, and innovation & strategy.”




# The playing field

Last year's playing field

Theme: "Into Orbit"









# 2: The Innovation Project

-  The team will choose and solve a real-world problem in the Innovation Project.
-  “Teams conduct research to solve a real-world problem, develop an innovative solution, share their findings with community stakeholders, and present their work at the competition.”
-  “They will be evaluated in research, innovative solution and presentation.”

# 3: The Core Values

“The *FIRST* Core Values are the cornerstones of the program. Teams are evaluated on HOW they work together, as well as inspiration, teamwork and Gracious Professionalism®.”

This is accomplished in the following 6 areas:

-  **Discovery:** *We explore new skills and ideas.*
-  **Innovation:** *We use creativity and persistence to solve problems.*
-  **Impact:** *We apply what we learn to improve our world.*
-  **Inclusion:** *We respect each other and embrace our differences.*
-  **Teamwork:** *We are stronger when we work together.*
-  **Fun:** *We enjoy and celebrate what we do!*

# 3: The Core Values cont.

What is Gracious Professionalism®?

- 🌐 “Gracious Professionalism is strong competition but a mutual respect and appreciation of your opponents.”
- 🌐 It allows for different opinions amongst team members to be evaluated and tested to figure out which idea might work better for the challenge.
- 🌐 It teaches students how to work through real-world situations by working together and with others.

# What does this look like?

We currently have 2 teams for your student to join.

- Team Johnson

- Team Graff

Each team has 2 adult coaches.

Once teams have been formed, the adult coaches will work with families to set a meeting time and place (usually once or twice a week).

Teams will work on their solutions for the regional tournament between August and November.

# What is this year's challenge?

**CITY  
SHAPER**



Robot Game  
Innovation Project  
Core Values

# CITY SHAPER Challenge

What if you could build a better world?  
Where would you begin?



More than ever, we must come together to innovate and solve problems. In *FIRST*®, you are part of a thriving community brimming with inspiration, creativity, and hope for a stronger, more sustainable future—one that's built better together. You have the power to help the cities, towns, and places you call home reach new heights. With the support of the *FIRST* community, this is your opportunity to lead our future forward—and up.



*FIRST* LEGO League is challenging YOU to think like scientists and engineers. During the CITY SHAPER season, YOU can decide how to build a better world starting in your own backyard.

# Details

**FLL Season-August thru December**

**\$130 fee includes:**

- National registration fee**
- Tabletop playing field supplies**
- Team t-shirt**
- Adult coach training**

# Details

What the \$130 fee does NOT include:

- MN Sectional Tournament - optional tournament for teams that have advanced - \$150/team
- MN State Championship - optional tournament for teams that have advanced - \$175/team
- Optional team supplies for items such as a team poster, costumes, etc.
- The LEGO Ev3 robot – seeking company sponsors
- A laptop

# Tournament Time Lines

Regional Tournament Choices (teams attend one):

November and December

11/16 Dakota Hills Middle School, Eagan

11/23 Lakeville South High School, Lakeville

Prior Lake High School, Prior Lake

12/7 & 12/8 Holy Family Catholic High School,  
Victoria

The State Tournament is on Saturday, February 23  
for teams that advance.

# I'm interested, so now what?

Step 1: Form a team including two adult coaches.

Step 2: Contact Autumn to register your adult coaches.

Step 3: Go to [www.shakopee.k12.mn.us](http://www.shakopee.k12.mn.us) and register for FLL under the Community Education tab. You will have to register under your team name.

Step 4: Your adult coaches will work with you to chose a time and place to meet each week.

**Questions?**