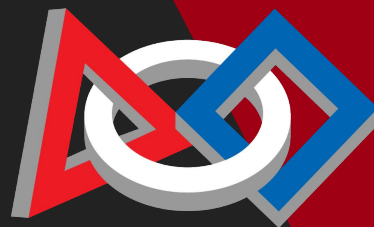




*FLL*  
*Program*  
*2022*



**FIRST<sup>®</sup>**  
**LEGO<sup>®</sup>**  
**LEAGUE**

**CHALLENGE**



# Who?



- ▷ For Inspiration and Recognition of Science and Technology
- ▷ Created in 1989, FIRST was created to promote and encourage engineering and technology for kids with an eye towards improving their community and the world.



- ▷ The regional partner to FIRST supporting FLL and FTC in Minnesota. They host and coordinate tournaments and promote the programs around the region.



- ▷ Kids Integrating Newly Grasped Technological and engineering Concepts
- ▷ PLSAS's FRC robotics team, originally founded in 2006.
- ▷ Part of PLSAS Patrons of the Arts & Activities.

# *What is FLL Challenge?*

- ▶ **The Robot Game**

Using a LEGO MINDSTORMS robot kit, a team designs, builds and programs an autonomous robot to achieve specific missions and earn points. Robots compete in three 2.5 minute rounds in an attempt to earn as many points as possible, and teams are evaluated on mechanical design, programming, and innovation & strategy.

- ▶ **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 are evaluated in research, innovative solution and presentation.

- ▶ **Robot Design and Programming**

Teams build and program a LEGO MINDSTORMS robot (RCX, NXT, EV3 or Spike PRIME) and share their work at the competition. Teams are evaluated on their engineering process of both robot design and robot programming, explaining their design iterations and strategies.

- ▶ **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.

# Robot Game

- ▶ **The Robot Game**

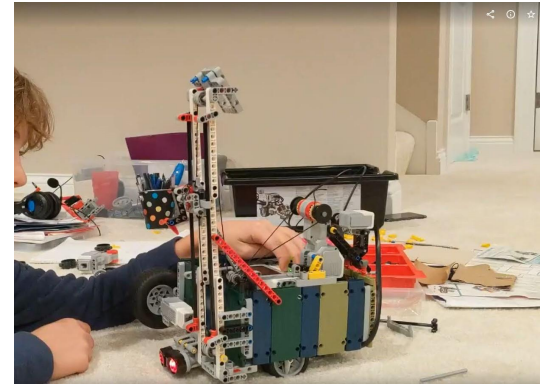
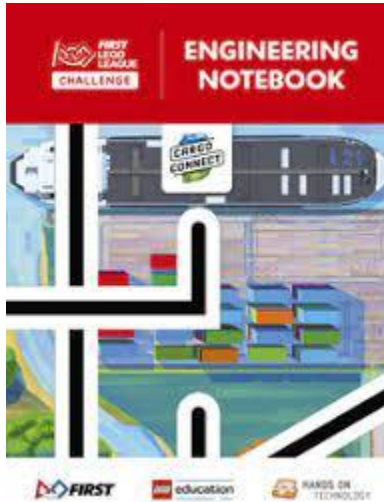
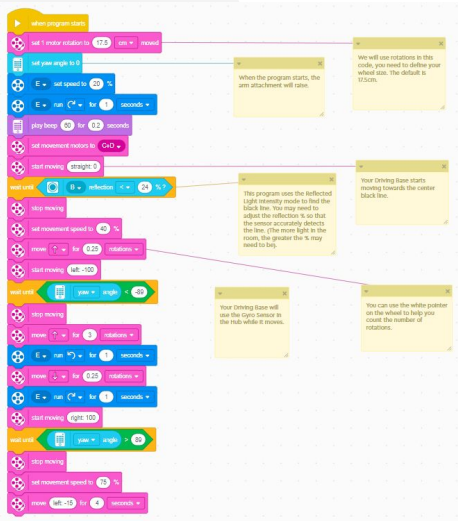
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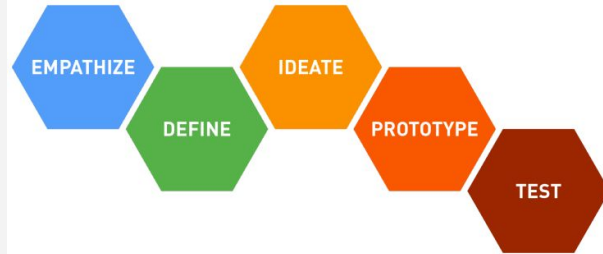


# Innovation Project

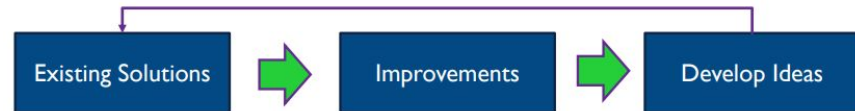
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Explore your energy journey. How can you reimagine a better energy future? It starts here, with your critical thinking and innovation leading the way to tomorrow's energized world with *FIRST*® **ENERGIZE**™ presented by Qualcomm.



- Identify a specific problem related to improving your energy journey.
- Research your problem and solution ideas.
- Design and create a solution that could improve your energy journey.
- Share your ideas, collect feedback, and iterate on your solution.
- Communicate your solution with a live presentation at an event.



# Core Values

- ▶ **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!*



# *Season Details*

- ▶ Practices twice a week (Tuesday and Thursday)
- ▶ 7pm-8:30pm
- ▶ Prior Lake High School Commons
- ▶ Season lasts from September 6th- November 20th
- ▶ Tournament held on November 19/20th at PLHS
- ▶ Registration fee: \$145
  - ▷ Scholarships are available. Every child interested should have the opportunity to participate.
- ▶ \$50 deposit (due at first practice) returned when kits are returned in working condition.

# *Season Details (cont.)*

- ▶ No access to PLHS on the following nights:
  - ▷ October 13th (PLHS Conferences)
  - ▷ October 20th (MEA Break; School closed) - No make up
  - ▷ October 21th (PLHS Conferences)
  - ▷ November 3th (PLHS Conferences)
  - ▷ November 8th (Election Night)
  - ▷ We will have a number of Wednesdays open to make up for these dates.

# *Equipment and Materials*

## ▶ We provide:

- ▶ Lego Robot and kit
- ▶ Laptop
- ▶ 4x8 foot practice tables
- ▶ Mission mat and models
- ▶ Storage bin for transport
- ▶ National registration
- ▶ State registration (all tournament fees)
- ▶ Practice space
- ▶ Mock tournament

## ▶ You provide:

- ▶ Elements related to project
- ▶ Parent supervision and coaching at practices
- ▶ 2 hours of volunteering per participant family at tournament
- ▶ Team t-shirts, if desired

# *Team Formation*

- ▶ Sept 6th @ 6-8PM in the Multipurpose Room at PLHS.
- ▶ Grades 4-8
- ▶ 5-7 kids per team
- ▶ Same or adjacent grades (i.e. Not 5th with 7th)
- ▶ 2 parents per practice per team(No experience necessary)
  - ▷ We are a volunteer organization, meaning this is not a drop-off program
  - ▷ If your child is disruptive, you may be asked to accompany them to every practice

# *Coaching Philosophy*

- ▶ **The children come first.** FLL is about the children having fun and getting excited about science and technology. Everything my team does starts and ends with this principle.
- ▶ **The children do the work.** This is their opportunity to learn and grow. The children on my team do all of the programming, research, problem solving, and building. Adults can help them find the answers, but cannot give them answers or make decisions

# What Next?

- ▶ Register on KINGTEC2169.com on the FIRST Lego League Challenge page under Progression of Programs Tab. (Will be available prior to Sept 6th.)
- ▶ Pay registration fee online (in person payment can be made at Info Night)
  - ▷ All fees must be paid before your child can be placed on a team
  - ▷ \* - Or scholarship request submitted
- ▶ Pay deposit at first practice
  - ▷ All checks can be made out to Prior Lake Robotics
  - ▷ Deposit checks will be collected by the first practice -- must be received before robots are distributed and will be returned, shredded or donated to KINGTeC (per your designation)
  - ▷ **NOTE**- You must be present at the kit turn-in night for your check to be returned (none will be mailed).
- ▶ **AT LEAST ONE PARENT PER PARTICIPANT MUST ATTEND TEAM FORMATION NIGHT** (Bring your calendars!)

# *Questions?*

[fl@kingtec2169.com](mailto:fl@kingtec2169.com)