Elonera Montessori Robotics
FIRST® LEGO® League (FLL) 2019 Season – City Shapers
FAQs for prospective team members

What is FLL?

***FIRST®* LEGO® League** is a competition catering for upper-primary and lower-secondary school students. Every year, teams of up to 10 students build, program and compete with a robot, while also learning about a modern science and engineering problem and developing solutions for it. The entire competition for the year is based around a theme – this year it's City Shapers. Past themes include natural disasters, senior citizens, food health & safety, climate change, medical science, and nanotechnology. Tournaments are run with the feel of a sporting event where teams participate like crazy while having the time of their lives. Judging takes place across three areas: Robot, Project and Core Values. What ***FIRST®* LEGO® League** teams accomplish is nothing short of amazing. Its fun. Its exciting. And the skills they learn will last a lifetime.

When are meetings?

This depends on coach availability as well as availability of the school premises. We are working toward access to the school hall on weekend afternoons. This is also when experienced coaches will be available to assist and co-coach prospective teams and guide new coaches.

We expect that most teams will want to meet weekly starting from August until November.

Activities at a practice session may include:

- Team building activities (Core Values)
- Research information on chosen project
- Go on an excursion to learn more about your project topic and talk to experts
- Build the robot game kit
- Work on your team's blog/diary
- Programming your robot
- Test, test and test again your robot
- Build your robot and robot attachments
- Prepare for fundraising activity (eg: bake sale)
- Design a presentation or skit for your research project and practice
- Build sets and props for your presentation
- Prepare a workbook showing your robot design and programming

How many kids can be on a team?

2-10 students each team. Ages 9 -16. Must be turning 9 in 2019.

Where are the tournaments held?

The Wollongong regional will be held on 30 November. Currently the location has not been set, however previous years have been held at the Illawarra Grammar School. The NSW 'National' championship will be held on 7-8 December at Macquarie University for teams that are invited as a result of their success at regionals. *note, the high school teams may be considering a different venue. Please see the Fleep channel.

How much does it cost?

$100 per student to cover the cost of registration as well as contribute to the cost of any additional parts/kits we may need. A payment plan is available on request.

Does my child need experience?

No, rookies are welcome. Teams may be a completely rookie team or a mix of experience levels.

Who will be on my child's team?

Teams will be negotiated once we know 1) how many students would like to participate, 2) how many coaches will volunteer and their availability 3) friendships/experience level/etc. Building a team and learning to get along, consider other people's contribution and being patient is part of the FLL experience.

I am happy to be a 'co-coach' but I don't have any experience

No problem. Everyone was a rookie once and most say it is a hard but very rewarding experience. Mainly adults are required to help guide the students and keep them engaged and on-task. We will have experienced students and coaches to guide, and if you can't always meet up face to face we are available by email.

What happens at ‘tournaments’?

Teams participate in four key areas:

1) Robot game, a 2.5 minute challenge where the robot tries to get as many points as possible by successfully completing missions on the FLL table using pre-programmed code.
2) Project presentation, where the team presents their research project and explains their innovative solution to their identified question.
3) Core values, where team members are observed and questions on how they’ve worked as a team throughout the season and how they’ve demonstrated the FLL core values
4) Robot engineering, explaining the principles behind their robot and what they have learned.

Tournaments are loud, busy and super fun. There is dancing, cheering, clapping and sometimes nerves. Most of the time robots ‘misbehave’ and learning and coping with that is part of the journey. Organisers are VERY aware of providing a fun yet safe environment and a positive experience for all.

How do we build, program and control a robot?

Robots are built using Lego Mindstorms EV3 equipment. Elonera Montessori School has a few education kits that will allow participation for a limited number of teams. Teams design, build and program a **LEGO®** robot to complete a series of challenges. The robot has to operate on pre-programmed instructions, and complete as many tasks as possible in only 2 minutes and 30 seconds. There are basic robot designs that are relatively easy to build that will accomplish the simplest mission. Kids will strategically design, build, redesign, test, build, and test again through an iterative learning process to interact with the game challenges.

What are the 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!