FIRST LEGO LEAGUE CHALLENGE

CLASS PACK EVENT GUIDE

FIRST

LEGO education

Running Your Tournament

Purpose: The school tournament is the culmination and celebration of the teams' work throughout the program.

Check out the Class Pack Tournament Video to see how the event can be implemented in the classroom.

PREPARATION (60 minutes before event)

Teacher:

• Set up the space as shown on page 5.
• Set up two competition fields for the robot games. Ideally, these will fit on official tables with walls (see Table Building Instructions firstlegoleague. org/season), but it will also work on ordinary school tables and on the ground (with Home area taped off).
  • Two teams play at the same time, and there is one mission that crosses over both competition fields.
• Allocate each team an area with a table where they will sit and work during the tournament. They are encouraged to watch the robot games and interact with the other teams.

Teacher/referee:

• Read the *Robot Game Rulebook* to check the field setup, missions, and rules. Photocopy enough score sheets or identify a scoring app to use.
• Print/photocopy the score sheet which is found at the back of the *Robot Game Rulebook*. You will need three copies per team.

Teacher/judge:

• Decide where the teams will present their work and whether this will be to the whole class or just to the teacher and/or volunteer judge(s).
• Print/photocopy the Class Pack Rubric which is found on page 9. You will need one copy per team.
• Look at the formative assessment the teacher has recorded to understand the progress each team has made since the beginning of the program.
• If you have volunteers to help you, the judges should be familiar with the Rubric and Judge Questions, which are found on pages 9 and 10. Referees should be familiar with the *Robot Game Rulebook* and Robot Game Scoresheets which are found on firstlegoleague.org

Scaling up from the classroom

• If you have more than five teams, you can scale up the size of your tournament and use a bigger room.
• If you have additional competition fields, you can set them up as practice tables.
• The teams could do their presentations to judges in a separate room.
• You could provide access to electricity like a power strip so teams can plug in their devices and charge their robots between rounds.
• If there is sufficient capacity, invite parents or other classes so teams can share the excitement with them.
• You could hold this event as a STEM night and invite the whole school and parents.

Running Your Tournament

TASK 1: INTRODUCTION (10 minutes)

Teacher:

- Welcome the teams and share the schedule. See page 6 for a sample schedule.
- Emphasize that the objective of the session is to allow teams to showcase their work. Remind them that the Core Values are an integral part of all they do.
- Show the *FIRST*® LEGO® League Teamwork Makes the Dream Work video. Encourage a FUN atmosphere.

TASK 2: PRESENTATIONS (60 minutes)

Teacher:

- Give 6-8 minutes for each team to present their Innovation Project and Robot Design and how they applied their Core Values to their work.
- Allow 3-4 minutes to answer questions from the teacher/judge or other students.

Teacher/judge:

- Fill out the rubric to record each team's achievement.
- This will add to the formative assessment the teacher has observed through the 12 sessions. You can find the formative assessment template in the *Class Pack Implementation Guide*.

TASK 3: ROBOT MATCHES (60 minutes)

Teacher:

- Two teams compete at the same time. The matches last 2.5 minutes, and the scoring and resetting takes another 3-5 minutes depending on how practiced the referee is.
- If possible, allow time for each team to have one practice round before their official matches begin.
- Hold as many rounds as time allows.
- Only the highest score the team achieves is counted in the final ranking for Robot Game.

Teacher/referee:

- Use the score sheet or a scoring app to record points for each match.
- Keep track of the scores in a simple spreadsheet.
- Reset the game table as needed between matches.

Running Your Tournament

TASK 4: CLEANUP AND AWARD DELIBERATION (20 minutes)

Teacher:

• Organize teams to clean up the classroom and put away their materials.

Teacher/judge/referee:

• Decide which team wins the School Champions award using observations at tournament, performance levels on rubrics, and formative assessment to decide which team was the best all-around performers. They need to be strong in all four categories (Innovation Project, Core Values, Robot Design, and Robot Performance), but they might not be the team that wins the Robot Game.

• Each team can win an award. The teacher chooses from the list of optional awards on page 7.

TASK 5: CELEBRATION (10 minutes)

Teacher:

• Address the whole class and celebrate each team's achievements!

• Create a FUN atmosphere – you could repeat the *FIRST*® LEGO® League song.
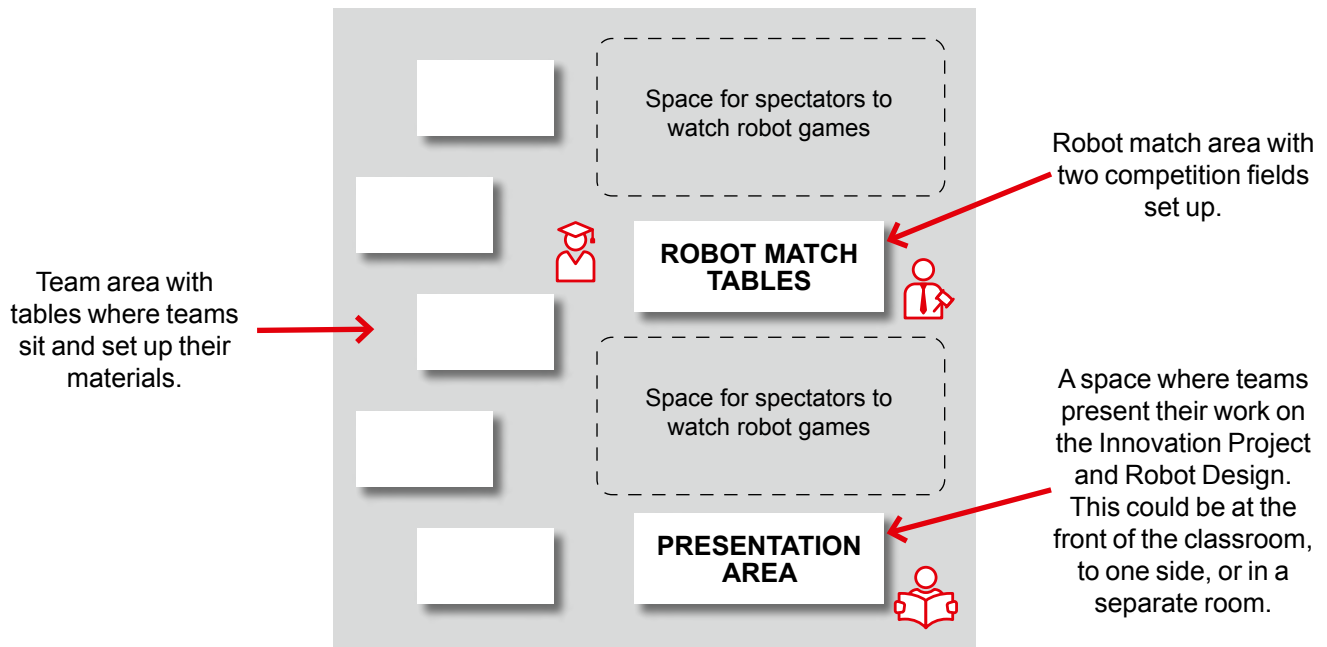
• Give award(s) to the teams.

WHAT'S NEXT?

• You might already know if your School Champion team will be progressing to a qualifying event. They should continue to meet to prepare. Check out page 8.

• Contact your program delivery partner for details on how to get team(s) registered for a qualifying event!

• Keep using the LEGO® Education SPIKE™ Prime or LEGO® MINDSTORMS® sets in your lessons. There are plenty of activities available here.

Celebration Tips

• Can you print a certificate for each child? You can also give a small prize like a medal.

• Give every team an award or just give one to the overall School Champions. It depends on how many teams you have.

• A fun way to recognize teams is a high-five line involving all the teams.

Tournament Setup

Layout of your classroom

Robot match area with two competition fields set up.

Team area with tables where teams sit and set up their materials.

ROBOT MATCH TABLES

Space for spectators to watch robot games

Space for spectators to watch robot games

PRESENTATION AREA

A space where teams present their work on the Innovation Project and Robot Design. This could be at the front of the classroom, to one side, or in a separate room.

Time
- When: During lessons in the school day, during an assembly, or after school.
- Timing: 2-3 hours depending on number of teams competing. This could be split over two different lessons.

Space
- The tournament space could be a classroom, school hall, or other large room.
- A private space for the teacher and volunteers to deliberate the awards could be helpful.

Staff
- 1 teacher can run this event.
- 2-3 volunteers would be useful if they are available. These could be teachers, school staff, older students, or parents.

- The teacher/referee needs to have a good understanding of the robot game missions, rules, and score sheet. These can all be found in the *Robot Game Rulebook*.

- The teacher/judge needs a simple understanding of the program and the Class Pack rubric on page 9.

Sample Tournament Schedule

Detailed Schedule

Time	Activity
9:00-9:10	Introduction
9:10-9:15	Transition
9:15-10:15	Presentations
9:15-9:27	Team 1
9:27-9:39	Team 2
9:39-9:51	Team 3
9:51-10:03	Team 4
10:03-10:15	Team 5
10:15-10:30	Break
10:30-11:30	Robot Game Matches
10:30-10:37	Teams 1 and 2
10:37-10:44	Teams 3 and 4
10:44-10:51	Teams 5 and 1
10:51-10:58	Teams 2 and 3
10:58-11:05	Teams 4 and 5
11:05-11:12	Teams 1 and 2
11:12-11:19	Teams 3 and 4
11:19-11:26	Team 5
11:30-11:50	Cleanup and Deliberation
11:50-12:00	Celebration

All times are flexible and can be changed to suit your school schedule.

The **introduction** and **presentations** can be shortened to fit into the first lesson.

The tournament can be delivered across multiple class periods, after school, or on the weekend.

The **Robot Game Matches** and the **Celebration** can be shortened to fit into the second lesson.

Timings might differ from qualifying events, but teams will be given one judging session to present their work on the Innovation Project and Robot Design. Their Core Values are evaluated throughout the presentation and during their robot game matches.

Schedule Tips

• The sample schedule is for five teams. You will need to adjust the schedule to fit the number of teams competing.

• Avoid scheduling teams back-to-back for robot game matches.

Allocating the Awards

The teams will showcase their work in the four separate areas of *FIRST*® LEGO® League Challenge. This is recorded as follows:

Robot Performance – the team's highest robot game score during a match

Robot Design – performance levels on the Robot Design criteria on the rubric

Innovation Project – performance levels on the Innovation Project criteria on the rubric

Core Values – performance levels on the Core Values criteria on the rubric and teacher observations during the program

• The School Champion's award goes to the team with the best all-around performance across all four areas, but they might not be the team that wins the Robot Performance. During deliberation, the teacher/referee/judge decides how to allocate the awards.

• Teacher/judge uses the following methods for assessment:
  • Observations at tournament
  • Performance levels from rubrics
  • Best robot game score
  • Formative assessment

All the teams can win an award from the following list:

Main Awards

School Champion's Award – the top team overall across Innovation Project, Core Values, Robot Design, and Robot Performance

Innovation Project Award – team that made a special effort in their Innovation Project

Core Values Award – team that consistently displayed the best Core Values

Robot Design Award – team that made a special effort in their Robot Design

Robot Performance Award – team with highest score in the Robot Game

Optional Awards

Breakthrough Award – team that made major progress in their confidence and capabilities in all aspects of program

Engineering Excellence Award – team with efficiently designed robot and project solutions

Motivate Award – team that demonstrated team building, team spirit, and enthusiasm

Note: Teams should only win one award, unless the School Champions also win the Robot Performance award.

Types of Events

Concept	School Tournament	Qualifying Tournament
Rubric	Class Pack rubric	Event rubrics
Robot Game	Identical at both event types	
Judging	• Each of the four *FIRST®* LEGO® League Challenge areas have equal weighting. • Teams will present their Innovation Project and Robot Design solutions and how they applied Core Values throughout their experience as time allows. (Timings will vary). • The teacher will use the Class Pack rubric, which has categories for the Innovation Project, Robot Design, and Core Values. • Questions based on Class Pack rubric will be asked. • The judging session is approximately 10-12 minutes.	• Each of the four *FIRST* LEGO League Challenge areas have equal weighting. • There is a single judging session (approximately 30 minutes). • Teams will present their Innovation Project and Robot Design solutions and how they applied the Core Values throughout their experience. • Judges will use the Event rubrics (Innovation Project, Robot Design, Core Values) to evaluate teams for awards. • Judges will ask questions based on the event rubrics. • The judging session is approximately 30 minutes.
Awards	**Main Awards**: School Champion's, Innovation Project, Core Values, Robot Design, Robot Performance **Optional Awards**: Breakthrough, Engineering Excellence, Motivate	**Required Awards**: Champion's, Innovation Project, Core Values, Robot Design, Robot Performance, Coach/Mentor **Optional Awards**: Breakthrough, Engineering Excellence, Rising All-Star, Motivate
Qualification	It is possible for school team(s) and/or the school champion to progress to a qualifying event through the purchase of a team registration.	Champion's award winners will advance to the next level in tournament structure.

Class Pack Rubric

Team #	Team Name

Judges are required to tick one box on each separate line to indicate the level the team has achieved.

Innovation Project

		BEGINNING	DEVELOPING	ACCOMPLISHED	EXCEEDS
IDENTIFY	Team has a clearly defined problem that it is well researched.	☐	☐	☐	☐
DESIGN	Team generated innovative ideas independently before selecting and planning which one to develop.	☐	☐	☐	☐
CREATE	Team developed an original idea or builds on an existing idea with a prototype model/drawing to represent their solution.	☐	☐	☐	☐
ITERATE	Team shared their ideas, collected feedback and included improvements in their solution.	☐	☐	☐	☐
COMMUNICATE	Team shared a creative and effective presentation of their current solution and its impact on their users.	☐	☐	☐	☐

Robot Design

		BEGINNING	DEVELOPING	ACCOMPLISHED	EXCEEDS
IDENTIFY	Team had a clearly defined mission strategy and explored building and coding skills they needed.	☐	☐	☐	☐
DESIGN	Team produced innovative designs and a clear workplan, seeking guidance as needed.	☐	☐	☐	☐
CREATE	Team developed an effective robot and code solution matching their mission strategy.	☐	☐	☐	☐
ITERATE	Team repeatedly tested their robot and code to identify areas for improvement and incorporated the findings into their current solution.	☐	☐	☐	☐
COMMUNICATE	Team's explanation of the robot design process was effective and shows how all team members have been involved.	☐	☐	☐	☐

Core Values

		BEGINNING	DEVELOPING	ACCOMPLISHED	EXCEEDS
DISCOVERY	Team explored new skills and ideas.	☐	☐	☐	☐
INNOVATION	Team used creativity and persistence to solve problems.	☐	☐	☐	☐
IMPACT	Team applied what they learned to improve their world.	☐	☐	☐	☐
INCLUSION	Team demonstrated respect and embraced their differences.	☐	☐	☐	☐
TEAMWORK	Team clearly showed they had worked as a team throughout their journey.	☐	☐	☐	☐
FUN	Teams clearly had fun and celebrated what they have achieved.	☐	☐	☐	☐

Feedback Comments

Great Job:

Think about:

Class Pack Judge Questions

Elicit information to complete your rubric with following questions or prompts

The color coding corresponds to your rubric and is as follows:

Blue boxes – Innovation Project	Green boxes – Robot Design	Red boxes – Core Values

Innovation Project

IDENTIFY	Describe the problem that you were trying to solve and the research you did.
DESIGN	Did you have a lot of ideas and what is most innovative thing about the idea you chose?
CREATE	Describe the steps your team took to develop your project solution.
ITERATE	How did your solution improve from the original idea?
COMMUNICATE	How will your solution help others and have an impact on your community?

Robot Design

IDENTIFY	Which missions did you choose and why?
DESIGN	How did you organize building the robot and writing the code?
CREATE	Tell us about how your robot and code work.
ITERATE	Describe one way your robot got better through the season.
COMMUNICATE	Explain the steps your team took to design, build and code your robot.

Core Values

Core Values	Describe the toughest problem you had and how your team solved it.
Many Core Values are also covered in previous questions	Of all the things your team accomplished, what are you most proud of?
	How did you ensure every team member was involved and understood the robot and coding?