

**FIRST
LEGO
LEAGUE**

CHALLENGE

CLASS PACK GUIDE



Getting Started Checklist

Thank you to all the teachers and youth leaders who will be delivering the *FIRST*® LEGO® League Challenge Class Pack to your students.

Please read the *Engineering Notebook* and *Robot Game Rulebook* (these guidebooks are given to the students) and the *Team Meeting Guide*. They are full of very useful information to guide you through the program. After completing the 12 sessions, your students will be prepared to participate in an event that celebrates the magnificent achievements made by the teams.



We've created a checklist to guide you toward success. Use this to help you get started.

- ☐ Ensure you have received all materials needed to run the program. See page 6 for list.
- ☐ Identify the space where you will implement the program and store materials. Think about the robot sets and any assembled models that may need to stay together.
- ☐ Think about the size of the event you want to have. Your event could be in your classroom or be a bigger event for the whole school.
- ☐ Create an implementation plan and timeline for how you will use the program. See pages [7-10](#) for implementation tips.
- ☐ Determine who will be participating in the program. Is it your entire class? Will the same materials need to be shared by different classes or other teachers?
- ☐ Encourage family and home engagement. Scan the QR code to visit the Family Engagement page.
- ☐ Determine how you will place the class into teams. The recommended team size is no more than 6 students.



**Family
Engagement
Resources**

Storage and Material Management

Before you get started with the *FIRST*® LEGO® League Challenge content, you might want to play a game where the teams identify pieces in their robot sets. It is recommended that students organize their robot sets to help in taking ownership of materials. This would allow you to start processes and procedures for keeping the sets organized.

After you have gathered or purchased all the materials your students will need, you could use plastic storage tubs or other containers to create a kit for each team in your class. You could store the *Engineering Notebooks* and robot sets inside the kit for each team, ensuring that each team is responsible for their materials and they won't get mixed up with others.

Alternatively, you could assign and label each robot set with the team name and/or number so the students know what materials to grab each time. Be sure to check the battery levels of your hardware devices and charge them as needed between sessions.

Designate a safe area for the robot sets, computers, Mission Models/table, and materials that students have been working on so they remain safe between class days/periods.



**POSSIBLE
STORAGE
SOLUTIONS**



Classroom Implementation

Flexible Implementation

First and foremost, use your professional judgment to augment this program to meet the needs of your students, class space, class timing, and additional curricular requirements. Set student expectations for participation in the program based on the student growth mindset of holistic and STEM skills.

Working in Teams

The sessions in the guidebooks have guided tasks for each student team. Here are the reasons behind this design:

- It ensures an equitable experience for every student in all aspects of the program.
- It provides additional opportunity for collaboration and communication.
- Small groups promote deeper learning of content and build holistic skills to share out learning with other team members.
- Fewer materials are needed, and they can be used by more students.
- Having smaller groups allows for students to get hands-on time with building, coding, and exploration.

How to Run Differentiated Groups

- Physically split the space to facilitate working in small groups.
- Establish norms for movement and talking in small groups.
- Be comfortable with talking and movement within groups.
- Orient students to daily goals for learning using the student outcomes for each session listed in the *Team Meeting Guide*.
- Have individual check-ins with each team at the start of class.
- Determine the length of time for daily tasks ahead of class and share with students.
- End each class with whole group sharing using the guiding questions outlined in the *Team Meeting Guide* as inspiration.



Running Your Event

Purpose: The Class Pack event is the culmination and celebration of the teams' work throughout the program.

VOLUNTEERS

- **Judge (2 recommended)** - Judges should be sent the Challenge Overview, Judge Questions, and Class Pack Rubric.
- **Referee (2 recommended)** - Referees should be sent the *Robot Game Rulebook* and *Class Pack Scoresheet*.

PREPARATION (60 minutes before event)

Teacher:

- Set up two competition fields in tournament setup for the robot games. Ideally, these will fit on official tables with walls, but it will also work on ordinary school tables or on the ground (with home areas taped off).
- Two teams play a match at the same time, one at each table in the tournament setup.
- Allocate each team an area with a table where they can set up their team materials and work during the event. They are encouraged to watch the robot games and interact with the other teams.
- Watch the Field Setup video for guidance.

Teacher/Referee:

- Read the *Robot Game Rulebook* to review the field setup, missions, and rules.
- Print/photocopy the score sheet. You will need three copies per team.
- If you have volunteers to help you, referees should be familiar with the *Robot Game Rulebook* and *Class Pack scoresheet*.
- Determine how you will time each 2.5-minute match. You could show a virtual timer on a TV or project screen, or on a laptop screen near the tables.

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. You will need one copy per team.
- If you have volunteers to help you, the judges should be familiar with the Class Pack Rubric and Judge Questions.

Scaling up

- If you have more than five teams, you can scale up the size of your event and use a bigger room such as a gymnasium or media center.
- 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, such as 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 have teams do judging in their classrooms. Then have the robot game matches at the event with teams setting up their project materials at tables to show families/guests (not for judging).
- You could hold this event as a STEM night and invite the whole school and parents.



**Event
Materials**



Sample Event Schedule

Detailed Schedule

8:00-9:00	Setup and Volunteers Arrive
9:00-9:10	Introduction
9:10-9:15	Transition
9:15-10:15	Presentations
9:15-9:30	Team 1
9:30-9:45	Team 2
9:45-10:00	Team 3
10:00-10:15	Team 4
10:15-10:30	Break
10:30-11:30	Robot Game Matches
10:30-10:40	Teams 1 and 2
10:40-10:50	Teams 3 and 4
10:50-11:00	Teams 1 and 3
11:00-11:10	Teams 2 and 4
11:10-11:20	Teams 1 and 4
11:20-11:30	Teams 2 and 3
11:30-11:50	Cleanup and Award Discussion
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.

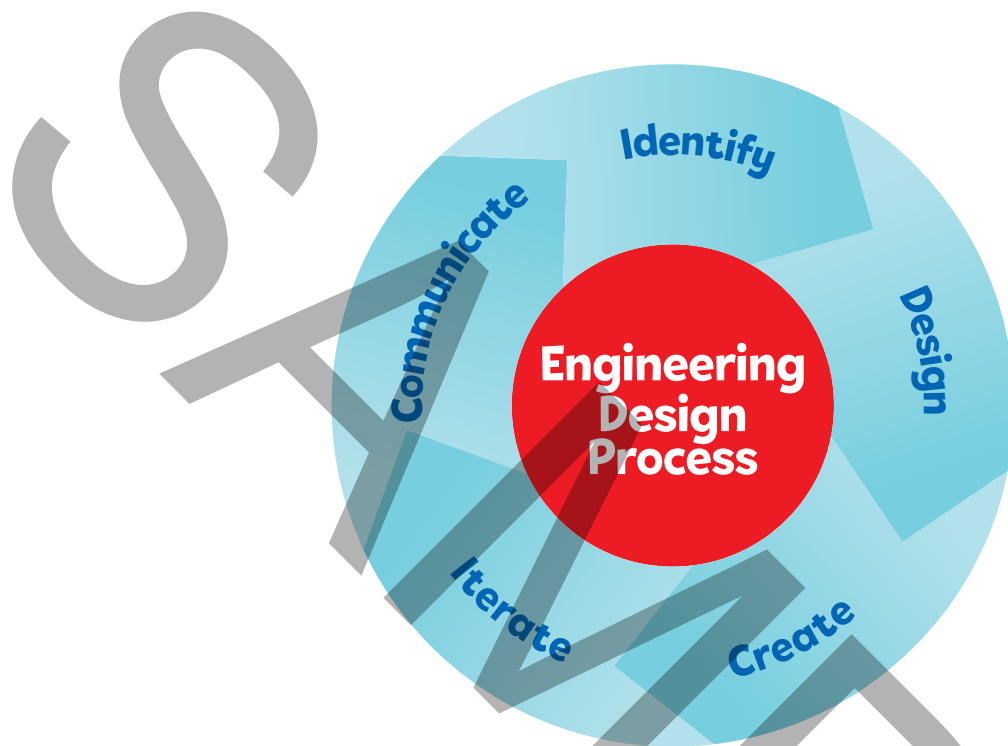
The event can be delivered across multiple class periods, after school, or on the weekend.

The **Robot Game matches** and the **celebration** can be shortened to fit into the second lesson.

Schedule Tips

- Avoid scheduling teams back-to-back for robot game matches.
- The sample schedule is for four teams. You will need to adjust the schedule to fit the number of teams competing.





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