

**FIRST
LEGO
LEAGUE**

DISCOVER

CLASS PACK GUIDE



education™

Welcome to the Program

Welcome to *FIRST*® and the *FIRST*® LEGO® League program. *FIRST* LEGO League captures children's curiosity and directs it toward discovering the wonders of science and technology. The program was created through a partnership between *FIRST* (For Inspiration and Recognition of Science and Technology) and LEGO® Education. *FIRST* LEGO League has three divisions: Discover, Explore, and Challenge. Your students will take part in the Discover Class Pack!

Thank you for participating in this innovative STEM program for students. Your students join a global community across more than 110 countries. Its impact is profound and leads to a further progression of STEM exploration, skills, and experiences even after students complete the program.

The Class Pack provides schools with the tools to implement *FIRST* LEGO League Discover in daily classroom lessons or as a structured after-school program. As the teacher, your role is to facilitate learning for your students and organize your implementation of the program. The guide is designed to help you do this.

This guide also contains information on how students can share their experiences and what they have learned throughout their journey – from highlighting your students' hard work in a classroom showcase to putting on your own school or organization-based *FIRST* LEGO League Discover event.



Getting Started Checklist

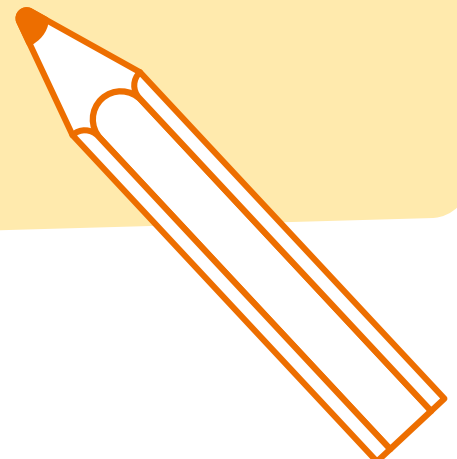
Thank you to all the teachers and youth leaders who will be delivering the *FIRST*® LEGO® League Discover Class Pack to your students.

Please read the *Engineering Notebook* (this guidebook is 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 sessions, your students will be prepared to participate in a celebration that recognizes 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 implement *FIRST* LEGO League Discover.
- ☐ Identify the space where you will complete the sessions and store materials between the sessions. Or a place to keep assembled builds between sessions if desired.
- ☐ Think about the final celebration event. Will you have it in your classroom and invite the children's families?
- ☐ Create a plan. How often during the week will you do the program? Will you complete a whole session at once or split the tasks across different meetings?
- ☐ Be sure all materials are unpacked and organized before starting Session 1. You may want to place the pieces into durable plastic storage bins. Get your children familiar with all materials.
- ☐ Encourage family and home engagement. Send the Discover More sets home with the children with the Discover More game letter.
- ☐ After completing the sessions, have the children participate in an event to celebrate their achievements.



Family Engagement

Families play a critical role in children's success in life. In *FIRST*® programs, families support their children by providing transportation, snacks, cheering at events, and more. *FIRST* is looking to expand the ways families engage together in *FIRST* programs.



Family Engagement Resources



Discover More Set

As part of Discover Class Pack, every student is provided

a Discover More set that includes two sets of Six Bricks. Developed by The LEGO® Foundation, the sets are a tool for children and their families to practice their memory, movement, creativity and more through short, fun, playful activities using six LEGO® DUPLO® bricks.

Discover More Game

The Discover More game provides families with all the instructions to play together. To get started, they will need the Discover More Game instructions, a Discover More set, a dice, and a token for each player.



Family Engagement Night

We encourage all schools to hold a class meeting in which families can hear more about the program, complete family engagement activities, and receive their Discover More sets. You could host the family engagement meeting in the evening and offer snacks and additional activities for families and their children to do.

A family engagement meeting could cover:

- What the program is
- What the habits of learning are
- The celebration event at the end of the program
- The opportunities provided by the program
- The Discover More set and how to support at home



Families who participate together in *FIRST*® LEGO® League discover the power of curiosity, creativity, and problem solving, building the foundation for life-long confidence in STEM learning.



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 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.



CLASS PACK EVENT GUIDANCE

**All you need to know
about running a
celebration in your
school.**



**Follow the advice and teacher tips in
this section as you prepare to host
your exciting celebration to recognize
all the students' achievements at the
end of their experience.**





WHAT IS THE CELEBRATION EVENT?

At the end of their experience, all teams should participate in a celebration event. The children will love sharing with others what they have built and learned. It could be held in your usual session meeting space, a classroom, a library, or anywhere else that has appropriate room for the teams to spread out, build, and have fun.

BEFORE THE EVENT:

- Choose a good space.
- Invite families, caregivers, teachers, and friends.
- Find volunteer reviewers.
- Print reviewing questions.
- Read through the celebration event session information.

DURING THE EVENT:

- Lay out the mats so two teams can work together.
- Assign at least one reviewer with each pair of teams.
- Get the kids excited for the final challenge.
- Ensure the reviewers talk with the children.
- Hand out certificates at the end.
- Have fun and celebrate children's achievements.

AFTER THE EVENT:

- Teach the other STEAM Park lessons.
- Continue to teach other STEM activities related to the theme.
- Find opportunities to use the vocabulary learned through the experience.
- Have the children use their teamwork skills in other sessions.



