



CLASS PACK IMPLEMENTATION GUIDE



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 Explore 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 Explore 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 Explore event.



Material Needs

Look over the following list for what materials and space you will need in your classroom. It is recommended that students work in teams of four. Each team will need space to design, build, and code

with their WeDo 2.0 set as well as to participate in teamwork activities. Access to an electronic device is important for each team to have for a successful program implementation.

For each student:

- 1 *Engineering Notebook**

For each team (within class):

- LEGO Education WeDo 2.0 Set
- 1 Explore Set
- 1 electronic device (see *Team Meeting Guide* for specific details)
- Team poster board and art supplies*

Classroom space:

- Small workstations/tables for each team (enough space for LEGO building, electronic device, and assembled models)
- Portable or permanent storage
- Internet access (optional)
- Electrical support

*Items with an asterisk are consumable each time a team goes through this experience. If you need additional printed copies of the *Engineering Notebooks*, you can order them through the *FIRST*® Dashboard or access digital PDFs of the *Engineering Notebooks* through the Access Thinkscape button on the dashboard.



Classroom Management

Teacher Role

The role of the teacher in a *FIRST*® Class Pack environment is more of a facilitator. Your teaching style should include a focus on developing holistic skills, building STEM confidence, embracing challenging activities and using play, discovery, and exploration.

Important things to consider when using the facilitator mindset is to:

- Reinforce *FIRST* Core Values.
- Ask the right kind of questions; guiding questions.
- Be comfortable with not having all the answers.
- Let students learn for themselves through problem-solving.
- Create opportunities for students to have ownership of the learning process and outcomes.
- Reflect on student and team goals and how they are working to achieve them.
- Guide students to the resources to help them achieve their goals.
- Celebrate mistakes and see learning opportunities.

Student Growth Mindset

As you guide students through their experience, having the right mindset is important. Creating student ownership of learning can assist with this. Ownership can be achieved by allowing students to focus on the skills they are developing and what they want to achieve and to use their problem-solving skills.

There are no right or wrong solutions, just different ways of solving problems. There is plenty of opportunity for students to enjoy their successes and learn from their mistakes.

As a teacher, if you can establish perseverance and resilience as traits to celebrate and be grateful for, students will be more likely to strive for them. Students need to be challenged just enough that it stretches their minds and creativity without overwhelming them.



Scope and Sequence Options

FIRST® has created various scope and sequences to provide options for implementation in the classroom. Below are high-level summaries of the scope and

sequence options. Detailed documents for each of the different scope and sequence options can be found on the FIRST Education website [here](#).

15 Hours	13 Hours: Sessions 1-12 outlined in guides		2 Hours: Event
30 Hours	2 Hours: Getting Started Activities	12 Hours: Sessions 1-12 outlined in guides	2 Hours: Event
	14 Hours: WeDo 2.0 Guided Projects (Choose 5 different projects.)		
40 Hours	2 Hours: Getting Started Activities	12 Hours: Sessions 1-12 outlined in guides	2 Hours: Event
	12 Hours: WeDo 2.0 Guided Projects (Choose 4 different projects.)		
	12 Hours: STEM Learning and Skill Growth (FIRST @ Home Unit Plan on next page)		
60 Hours	2 Hours: Getting Started Activities	12 Hours: Sessions 1-12 outlined in guides	2 Hours: Event
	30 Hours: WeDo 2.0 Guided and Open Projects (Choose 10 different projects.)		
	14 Hours: STEM Learning and Skill Growth (FIRST @ Home Unit Plan on next page)		
80 Hours	2 Hours: Getting Started Activities	12 Hours: Sessions 1-12 outlined in guides	2 Hours: Event
	48 Hours: WeDo 2.0 Guided and Open Projects (complete all projects)		
	16 Hours: STEM Learning and Skill Growth (FIRST @ Home Unit Plan on next page)		

Professional Development Resources

FIRST® Certified Professional Development

FIRST offers an immersive learning experience for teachers that will help them acquire or strengthen their facilitation skills for project-based learning and building holistic skills.

FIRST Certified Professional Development is available in both remote and in person formats. We

hold regional sessions at various locations in the US and Canada as well as custom sessions for school districts. To find more information about professional development and see available upcoming professional development dates, visit [here](#) or contact [FIRST School Engagement](#).

FIRST LEGO LEAGUE DISCOVER	FIRST LEGO LEAGUE EXPLORE	FIRST LEGO LEAGUE CHALLENGE
Grades PreK -1	Grades 2-4	Grades 4-8
1 Day (6 hours)	2 Days (12 hours)	2 Days (14 hours)

Additional Training Opportunities

As part of our commitment to creating a diverse, inclusive, and equitable community for all our participants, FIRST has trainings on how you can inspire the youth voice, create a sense of belonging, and more. You can access these trainings [here](#).

LEGO® Education offers product-specific training available that you can access [here](#). Your local FIRST Program Delivery Partner might offer FIRST training in your area. For information on local training and workshops, you can contact your Program Delivery Partner [here](#).



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