

**FIRST  
LEGO  
LEAGUE**

**EXPLORE**

# CLASS PACK GUIDE







**FIRST® LEGO® League  
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The **LEGO** Foundation



# 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.



# Getting Started Checklist

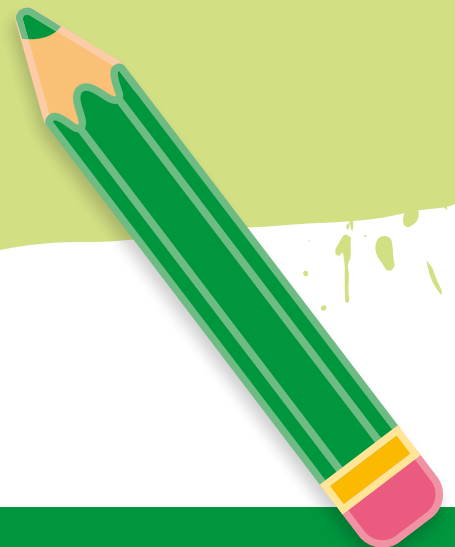
Thank you to all the teachers and youth leaders who will be delivering the *FIRST*® *LEGO*® League Explore Class Pack to your students.

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 12 sessions, your students will be prepared to participate in a festival 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 festival 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 8-9 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.
- Determine how you will place the class into teams. The recommended team size is no more than 4 students.



# 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 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 SPIKE™ Essential/ 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.



# Storage and Material Management

Before you get started with the *FIRST*® LEGO® League Explore content, you might want to play a game where the teams identify pieces in their robot sets. It is recommended that students organize their LEGO® 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 of 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 the robot and Explore 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 in the classroom.

Alternatively, you could also assign and label each robot set and Explore 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.

After you have all the kits assembled, you will need a place to store them. Beginning in Session 8, each team may need a sturdy board or container (such as a large plastic container, a cardboard box, a wooden board, etc.) to protect, store, and potentially transport their team models. Beginning with Session 10, each team will need a poster board to create a team poster. You will also need to identify a place to store the posters.

## 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:

- Ensures equitable experience for every student in all aspects of the program.
- 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 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.





You will need to adjust how each session is completed by your students if your designated class time to complete each session is different than the allotted 60 minutes per session outlined in the guides. The length this program will take to complete will depend on time within the day you have available to do *FIRST*® LEGO® League Explore and how often you will teach this program (daily, weekly, etc.).

Following is a daily lesson planning example for how to adjust the session content to meet a different class time frame. This example is from Session 1 and uses a 30-minute class time.

### Day 1 (Session 1)

Time	Activity	Teacher Notes
10 minutes	Introduction Activity	Review activity listed in Session 1 of the <i>Team Meeting Guide</i> .
15 minutes	Complete the first page of Tasks in Session 1.	Each student should fill out the writing and drawing space on the first page of Session 1 in their <i>Engineering Notebook</i> .
5 minutes	Clean Up	Show teams where to keep their <i>Engineering Notebooks</i> .

### Day 2 (Session 1)

Time	Activity	Teacher Notes
5 minutes	Check in with teams.	Review Session outcomes in the <i>Team Meeting Guide</i> .
15 minutes	Complete the second page of Tasks in Session 1.	Each student should fill out the drawing space on the second page of Session 1 in their <i>Engineering Notebook</i> .
5 minutes	Share Task	Look at Guiding Questions in the <i>Team Meeting Guide</i> .
5 minutes	Clean Up	Look at the Cleanup Pointers in the <i>Team Meeting Guide</i> .

\*If your school or district is running as a cohort using reusable materials, collaborate with other teachers who will run the program on daily lesson planning and timing.

# 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 guiding questions to get students thinking.
- 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.

Promote inquiry by using open-ended questions that lead to more student discovery and investigation. Use the *FIRST Inspires Inquiry Poster* as a resource for inquiry questions you can use with your students.



# FIRST® LEGO® League Explore Resources

FIRST® has created many resources to help with the implementation of FIRST® LEGO® League Explore in the classroom. These support resources provide different activities and platforms that you can use to engage with your students and extend their STEM learning.



## Kahoot! Series



The *FIRST* LEGO League Explore Kahoot! series covers topics such as *FIRST* Core Values, Engineering Design Process, Coding, Robot, and more. These Kahoot! activities are a great way to engage the students in a fun way and introduce them to what *FIRST* LEGO League Explore is and its main components. Be sure to subscribe to the *FIRST* community on the Kahoot! page to stay tuned for updates.

## STEM Activities



Explore the *FIRST* LEGO League Explore STEM learning series available in the Seesaw Learning Platform. You can use these activities to engage students in STEM learning, skill building, and FUN! Lessons cover topics such as coding, engineering, design, Core Values, and more. These activities are easy to implement with limited resources and can either stand alone or work as a great supplement to a *FIRST* Class Pack experience.



EXPLORE

## Season Resources



Each year, *FIRST* releases resources specific to the season theme. On the Season Resources page, you will find digital versions of the guidebooks, videos, certificates, and a multitude of support resources including Session Slides and Multimedia Resources.

# FIRST® Education Resources



FIRST® Education supports educators by providing additional educator content and resources. Below is a list of the some of the educator resources available.



## Scope and Sequences

FIRST Education has created various scope and sequences to provide options for implementation in the classroom. Detailed documents for each of the scope and sequence options can be found on the FIRST Education website.

FIRST® LEGO® League Explore, Grades 2-4 ✕

- 15 Hours
- 30 Hours
- 40 Hours
- 60 Hours
- 80 Hours

FIRST® LEGO® League Explore, Grades 2-4 ✕

- 21<sup>st</sup> Century Skills
- CASEL SEL
- Common Core English Language Arts
- Common Core Math
- Complete Set
- CSTA
- ISTE
- ITEEA
- NGSS

## Standards Alignments

FIRST Education has completed an external analysis and mapping of all its programs to national educational standards. Custom alignments have also been completed for specific areas in the various states and countries.

Contact [FIRSTeducation@firstinspires.org](mailto:FIRSTeducation@firstinspires.org) to see if alignments are available for your state or location.

## Skills Progression

FIRST has created a learning progression of skills used in FIRST® LEGO® League Explore and their correlation to various subject areas. The document allows teachers to see how FIRST LEGO League Explore can be used across different grades to develop skills.



### FIRST® LEGO® League Explore – Learning Progression

The FIRST® LEGO® League Explore learning progression below outlines the differences in student learning outcomes for the program by grade level. It articulates the sequencing of learning that is expected with participation in that grade level. It could also occur as a result of multiple years of participation in FIRST programming. Written as a checklist that reflects clearly articulated learning expectations from the perspective of the student to articulate learning while preparing students for more challenging and sophisticated concepts at the next level. The focus is to make sure that students are learning age-appropriate material, knowledge, and skills that are neither too advanced nor too rudimentary. This progression could be repurposed as a student-facing document to be used as a reflection of learning upon completion of the FIRST LEGO League Explore experience.



#### I have EXPLORED – checklist for FIRST® LEGO® League Explore

	Grade 2 YEAR 1	Grade 3 YEAR 2	Grade 4 YEAR 3
<b>Science</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> By building my Explore model, have made observations to collect an object using a small set of pieces and can describe them into a new object.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> When making my Explore model, make observations and measurement of the object in order to predict future motion, calculations and solve a problem applying scientific ideas.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Using my Explore model, connect evidence to explain the need of an object, make observations about the transformation of energy, and apply scientific ideas to design, test and refine a device that converts energy from one form to another.</li> </ul>
<b>Math</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Using the LEGO® bricks in the Explore set, can tell the difference to the weight of two different objects to choose the best brick for my design.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I identify patterns using LEGO bricks in the Explore set, add or subtract to patterns, show scaled pictures, and understand their characteristics (angles, lines, attributes).</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Using a ruler to measure an object, I understand that an angle has to measure in degrees, how to classify two-dimensional figures, and topographic lines of symmetry.</li> </ul>
<b>Reading</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I can read longer words with long vowel sounds related to STEM (science, technology, engineering, and math) activities and understand their functions in the Engineering Notebook to completed learning.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I determine the main idea of a STEM based text, account for details, and describe the relationship between a series of steps in the Engineering Notebook.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I use context to self-correct STEM word recognition and solve to details and examples in the Engineering Notebook when explaining the meaning of the text.</li> </ul>
<b>Engineering Design</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I show my Explore model. I draw a simple sketch with a physical model to illustrate how the object functions and solves the problem.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I provide evidence to support explanation of design solutions, provide a concise following that bring a plan for building and design my Explore model to meet identified criteria and constraints given.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I incorporate specific criteria for success and reflect on the materials, time, or cost, and plan and carry out tests to identify aspects of the Explore model that can be improved.</li> </ul>
<b>Coding</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I construct step-by-step instructions both independently and collaboratively to make my device accomplish tasks, using a block-based programming language and when the device does not act as expected, analyze and correct the error.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I decompose a larger problem into smaller problems independently and collaboratively. I plan as part of the design development process, using a variety of strategies, construct programs that use loops, patterns, or events.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> I create block-based programming algorithms using variables, perform number calculations on variables, construct programs to accomplish a task both independently and collaboratively and classify or arrange groups of items based on the attributes or actions.</li> </ul>

Contact Libby Simpson, FIRST Director of Education, [simpson@firstinspires.org](mailto:simpson@firstinspires.org), for additional information.

# Assessment Resources

## Formative Assessments



You can keep track of how your students are progressing against the outcomes for each of the 12 sessions using this formative assessment sheet. Place the session outcomes into the formative assessment templates.

## Engineering Notebooks

The *Engineering Notebook* serves as a proof of learning and is a great resource for student teams to document the process they went through to create their team model and team poster. Encourage them to document how they demonstrate Core Values throughout their experience.



## Summative Assessments

There are multiple summative assessments within the program. The culminating event or showcase serves as a capstone of the students' achievements and participation in the program. Evidence of learning includes the final event, final presentations and final products: team model and team poster.

## Public Celebration

During the festival, student teams will get the chance to showcase all the work they have prepared. You will be able to observe and record a summative assessment of how they have done using the reviewing sheet.



# LEGO® Education Resources

## Getting Started

LEGO® Education has additional educator content to help with implementation into classrooms. These resources and other relevant content can be used prior to starting the *FIRST*® LEGO® League Explore, during the program, or as an extension once the program is complete.



## Lesson Plans

This program utilizes the complete solution packages that LEGO Education has available. The robotics sets purchased for use with the *FIRST* LEGO League Explore also include additional lesson plans and resources available through the LEGO® Learning System and the LEGO Education website.



## Software Downloads

Download and install all the software and student apps needed to successfully integrate SPIKE™ Essential or WeDo 2.0 into your classroom.



## LEGO Education Community

LEGO Education has created a community page for educators to support and learn from one another, find inspiration, and to connect with their peers.



# 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 as well as custom sessions for school districts.

FIRST LEGO LEAGUE DISCOVER	FIRST LEGO LEAGUE EXPLORE	FIRST LEGO LEAGUE CHALLENGE
Grades PreK-1	Grades 2-4	Grades 4-8
6 hours	12 hours	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.



Equity, Diversity, and Inclusion Training

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.



Find Your Partner

LEGO® Education offers a personalized learning program that inspires teachers to learn, practice, and master competencies that support playful, hands-on STEAM learning with maximum impact on student outcomes.



LEGO Education Training

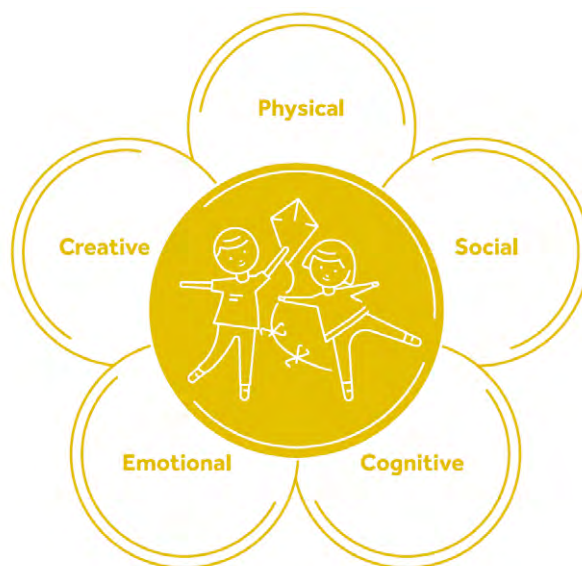


# FIRST® LEGO® League Education Philosophy

FIRST® LEGO® League is a program created through a partnership between FIRST® and LEGO® Education and is infused with the educational philosophies of both organizations. All three divisions of FIRST LEGO League: Discover, Explore, and Challenge, follow these philosophies.

## Learning through Play

This program encourages schools to incorporate play into the learning process throughout all grades. Play has positive impacts on holistic skill development. The guided materials are designed to increase confidence in STEM for both students and teachers. Content is designed with the idea that the teacher does not know all the answers. The materials provided don't give the exact answers but provide guidance and tips to the teacher on how to support their students. It is for the students to determine the way forward in solving the problem through play, discovery, and exploration.



Five Skills for Holistic Development



Intellectual Challenge



Authenticity



Public Product



Collaboration



Project Management



Reflection

Use the *Engineering Design Process Poster* and *Project-Based Learning Mindset Poster* as resources in your classroom for your students. You can access these posters in the *Class Pack Resources* module in Thinkscape.

## Project-Based Learning

FIRST LEGO League is a project-based learning program that creates meaningful, authentic learning opportunities for the students. Students gain knowledge and skills by working toward goals through the investigation of solutions and complex problem-solving.

Key project-based learning elements include:

- **Intellectual Challenge:** To start the engineering design process, this program begins with a challenge to solve.
- **Authenticity:** This program features age-appropriate real-world contexts and includes career awareness.
- **Public Product:** Teams present public products as a showcase of work to a public audience.
- **Collaboration:** Teams work together to brainstorm and develop design ideas then make decisions to create public products.
- **Project Management:** Scaffolded through the engineering design process and teams hone these skills throughout their experience.
- **Reflection:** Reflecting on an experience is a key tool that is incorporated after achieving a learning outcome.

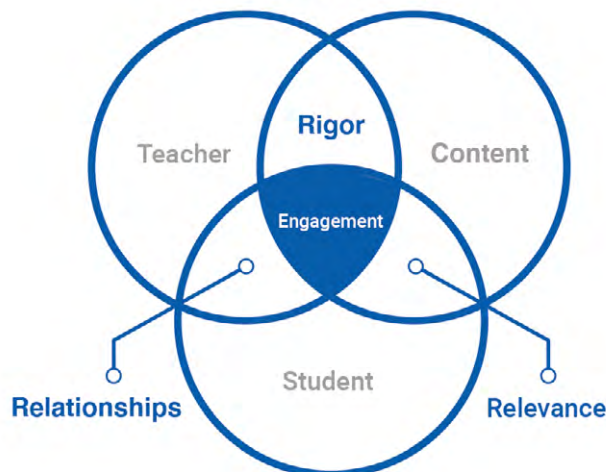


## Rigor, Relevance, and Relationships

Through the data of our longitudinal study, it has been proven that experiencing just one year of *FIRST*<sup>®</sup> LEGO<sup>®</sup> League has an impact on STEM outcomes for students. These outcomes are manifested by this program's rigorous and relevant content that incorporates relationships within a team and the larger community.

- **Rigor:** The teacher is the facilitator of a student-led, engaging experience involving activities related to robotics, coding, engineering, research, and innovative design.
- **Relevance:** Students acquire technology literacy by experiencing authentic activities with ties to careers that build technical and holistic skills through real-world problem-solving.
- **Relationships:** This program engages students to foster pathways to careers with the mission of building a better society and activating students to action in their communities.

## Rigor, Relevance and Relationships



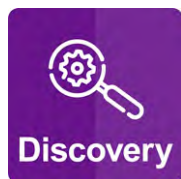
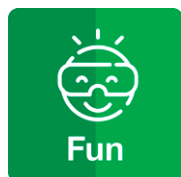
## Core Values

The *FIRST*<sup>®</sup> Core Values and ethos are the foundation of the program. For the *FIRST* Core Values to have effect, they must be known and practiced. The Core Values should be woven into all activities, projects, assessments and reflection tools to infuse them into the student learning. The Core Values are used within every step of the engineering design process as teams develop their solutions.

*Gracious Professionalism*<sup>®</sup> and *Coopertition*<sup>®</sup> are part of the ethos of *FIRST*. *Gracious Professionalism* is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. *Coopertition* is displaying unqualified kindness and respect in the face of fierce competition.

The *Core Values* Poster is a great tool to place in your classroom as a reference for your students. You can find this poster in Thinkscope.

To read more about the LEGO<sup>®</sup> Education Philosophy, scan the QR code.



# CLASS PACK EVENT GUIDANCE

## All you need to know about running a festival in your school.

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



# Running Your Festival



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

## PREPARATION (60 minutes before event)

### Teacher:

- Set up the space.
- If you have space, set up seating for spectators, team members, and families.
- Allocate each team an area with a table where they will sit and work during the festival and display their team model and poster.
- Get materials ready for additional activities (if desired) for teams to do during the reviewing time.

### Teacher/Reviewer:

- 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 reviewers.
- Make sure you have copies of the reviewing sheets and questions (one 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.
- You may want to have additional activities for the teams to do while other teams are being reviewed. This could include free building with LEGO® pieces or STEM-related activities.

## Scaling up from the Classroom

- If you have more than 5 teams, you can scale up the size of your festival and use a bigger room.
- The teams could do their presentations to reviewers in a separate room.
- You could provide STEM-related activities for teams.
- 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 Festival

## TASK 1: INTRODUCTION (10 minutes)

### Teacher:

- Welcome the teams and share the schedule.
- Emphasize 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.



### Tips

- Sharing their work with an audience might be a new experience for some of the students, so encourage a supportive atmosphere and make sure your reviewers use positive language!
- Teams not being reviewed could serve as the audience during the presentations or share feedback with the team presenting.

## TASK 2: REVIEWING (50 minutes)

### Teacher:

- Give six minutes for each team to present their Team Model and Poster in any order.
- Allow four minutes for each team to answer questions from the teacher/reviewer or other students.
- Teams not being reviewed could be completing additional activities or look at the other teams' work.

### Teacher/Reviewer:

- Fill out the reviewing sheet to record each team's achievement. This will add to the formative assessment the teacher has observed through the 12 sessions.



Formative Assessment



# Running Your Festival

## TASK 3: CLEANUP AND AWARD DELIBERATION (10 minutes)

### Teacher:

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

### Teacher/Reviewer:

- A reviewers' role is not to judge teams, but rather to show interest in each team's ideas.
- Use your observations of Core Values from throughout the program .
- The goal of the event is to celebrate teams for their accomplishments.
- Use the event documents to help organize the reviewing experience and, if applicable, award selection.

## TASK 4: CELEBRATION (15 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?

- Keep using the LEGO® Education SPIKE™ Essential/WeDo 2.0 sets in your lessons. There are plenty of activities available from LEGO Education.



LEGO  
Education  
Activities

### Celebration Tips

- Can you print a certificate for each child? You can also give a small prize like a medal.
- A fun way to recognize teams is a note home to parents about the program and what the teams accomplished.



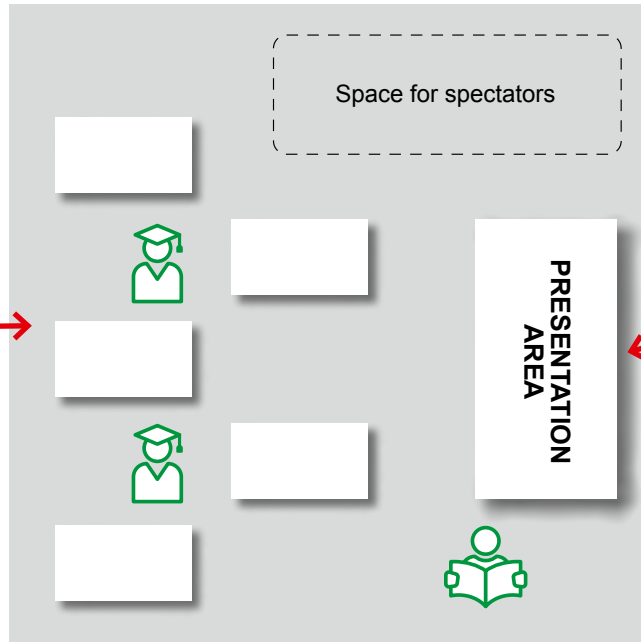
Certificates



# Festival Setup

## Layout of Your classroom

Team area with tables where teams sit and set up their materials. This can also be the space from where they present their work. Alternatively, they could take turns to move to a presentation area.



If you do not choose for teams to present at their tables, you will need a presentation area. 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 festival 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.

### Awards and Certificates

- An award list is provided to recognize teams' achievements.
- Certificates or even small prizes are all very popular.

### 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/reviewer needs a simple understanding of the program and the reviewing sheet.



# Sample Festival Schedule

## Detailed Schedule

9:00-9:10	Introduction
9:10-9:15	Transition
9:15-11:05	Reviewing
9:20-9:30	Team 1
9:40-9:50	Team 2
10:00-10:10	Team 3
10:20-10:30	Team 4
10:40-10:50	Team 5
11:05-11:15	Cleanup and Deliberation
11:15-11:30	Celebration

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

A festival can be delivered across one or two sessions, after school, or on the weekend.

### Schedule Tips

- The sample schedule is for five teams. You will need to adjust the schedule to fit the number of teams participating.
- Additional activities can be completed during the Reviewing time.



## Let's Celebrate!



# Reviewing Sheet

## EXPLORE

Name: \_\_\_\_\_ Team Name/Number: \_\_\_\_\_

Reviewers are required to tick one box on each separate line to indicate the team's achievement.

### Reviewing Criteria:

**Beginning:** This item was beginning to develop in the team's model, poster, presentation, or answers.

**Accomplished:** The team clearly showed this item in their model, poster, presentation, or answers.

**Exceeds:** The team went above and beyond the challenge in this area.

		Beginning	Accomplished	Exceeds
<b>CHALLENGE SOLUTION</b>				
What did your team learn about the challenge?	The team learned about the challenge and explored possible solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How could this impact your community?	The team's solution has the potential to make a great impact on the community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>CORE VALUES</b>				
How did you use Core Values?	Team members explained how they worked as a team and understood the Core Values by giving examples.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What skills did you learn from each other?	Team members demonstrated they learned new skills when working together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>TEAM MODEL</b>				
Describe your team model.	The team described the team model and the solutions to the challenge that it represented.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How did you include your Explore Set in your team model?	The team described how they creatively used one or more of the components in their team model.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>CODING</b>				
What part of your model is motorized?	The team explained how they used motor(s) and sensors to make their model move and be interactive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How did you code your motorized part?	Team members explained how their code made their model move.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>TEAM POSTER</b>				
What did you include in your team poster?	The poster showed information about their challenge solutions, team model, coding, and their team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How does it show your team journey?	Team members told or showed how they worked as a team to create their poster.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



# Reviewing Questions

Here are a series of questions to prepare for the event. You can use these questions to help the teams explain their journeys, what they learned and created.

## Challenge Solution

- What did your team learn about the challenge?
- How could this impact your community?

## Core Values

- How did you use Core Values?
- What skills did you learn from each other?

## Team Model

- Can you describe your team model?
- How did you include your Explore Set in your team model?

## Coding

- What part of your build is motorized?
- How did you code your motorized part?

## Team Poster

- What did you include in your team poster?
- How does it show your team journey?

# Award list

Use the reviewing sheet to help with the allocation of awards. Each team should receive one award. The same award can be given to several teams.

## Challenge Solution Award

These teams showed excellent problem-solving skills to create an innovative and helpful solution to the challenge.

## Coding Award

These teams gave effective explanations about how their code made their team model move and showed good communication skills.

## Core Values Award

These teams demonstrated great teamwork as they explored the challenge, showing they fully understood the *FIRST*<sup>®</sup> Core Values.

## Team Poster Award

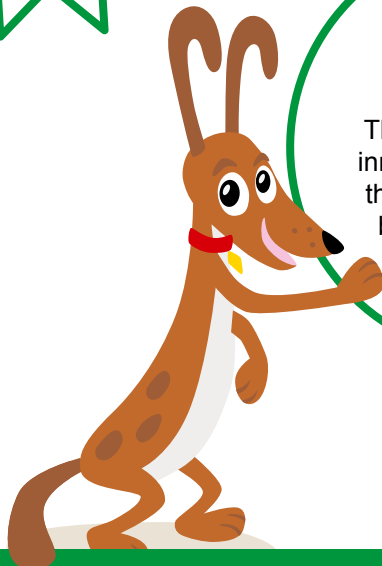
These teams showed creativity on their team poster and clearly explained what they had learned through their *FIRST*<sup>®</sup> LEGO<sup>®</sup> League Explore team journey.

## Team Model Award

These teams displayed innovation and creativity through the design and building of their team models.

## Name Your Own Award

These teams can be recognized for achievements outside the award list, for example, the Community Impact Award.







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