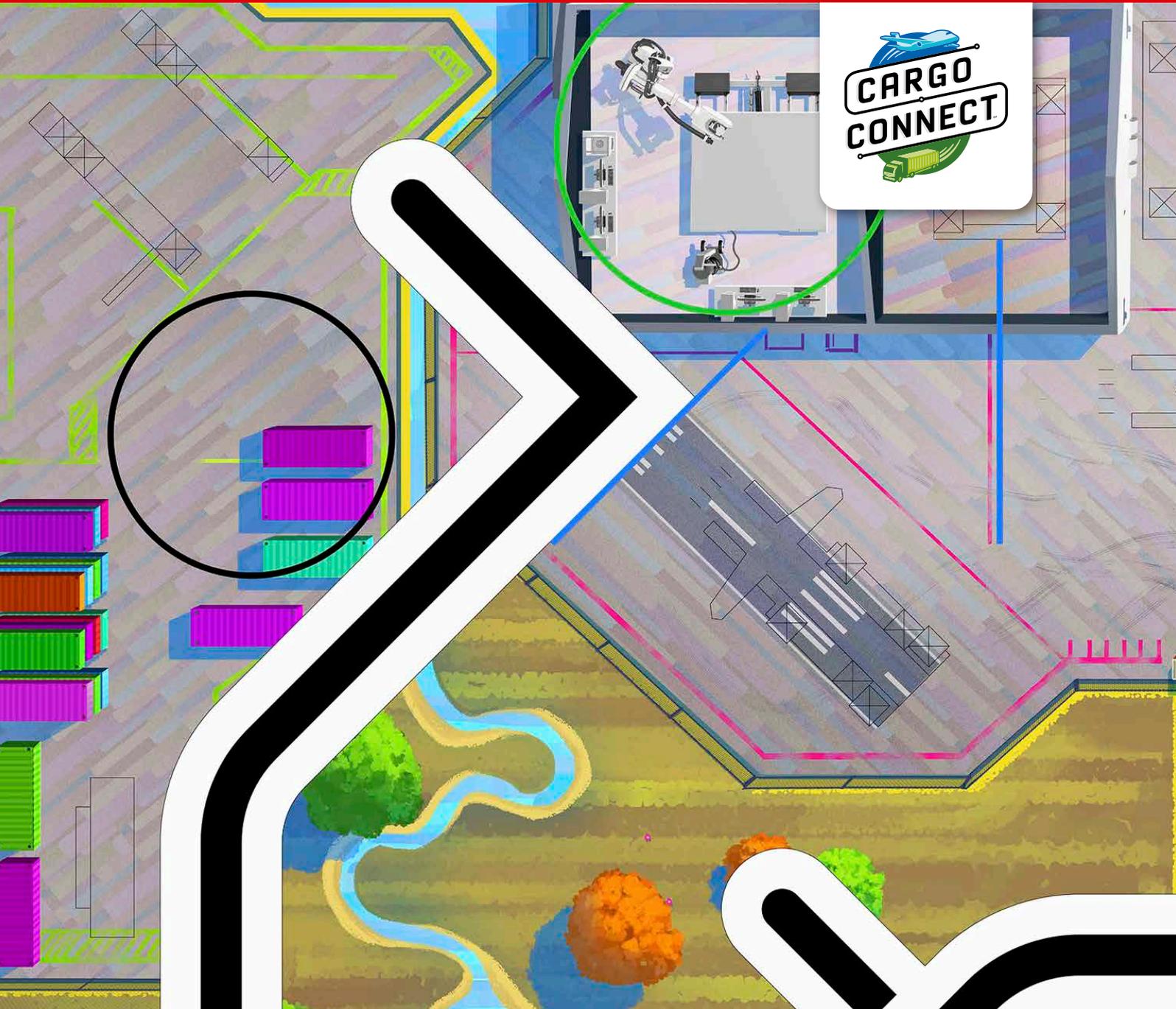




TEAM MEETING GUIDE



Introduction to **FIRST**® **LEGO**® League Challenge

Friendly competition is at the heart of **FIRST**® **LEGO**® League Challenge, as teams of up to 10 children engage in research, problem-solving, coding, and engineering – building and programming a **LEGO**® robot that navigates the missions of the Robot Game. Teams also participate in an Innovation Project to identify and solve a relevant real-world problem.

FIRST **LEGO** League Challenge is one of three divisions by age group of the **FIRST** **LEGO** League program. This program inspires young people to experiment and grow their confidence, critical thinking, and design skills through hands-on STEM learning. **FIRST** **LEGO** League was created through an alliance between **FIRST** and **LEGO**® Education.



Welcome to **FIRST**® **FORWARD**™ and **CARGO CONNECT**™

Welcome to the **FIRST**® **FORWARD**™ season. This year's **FIRST** **LEGO** League challenge is called **CARGO CONNECT**™. Children will learn about how cargo is transported, sorted, and delivered to its destinations. As more demands are placed on transportation systems, the children need to rethink how cargo

is transported from place to place. We have the power to build a path forward and invent the future of transportation. And it starts here, with you.

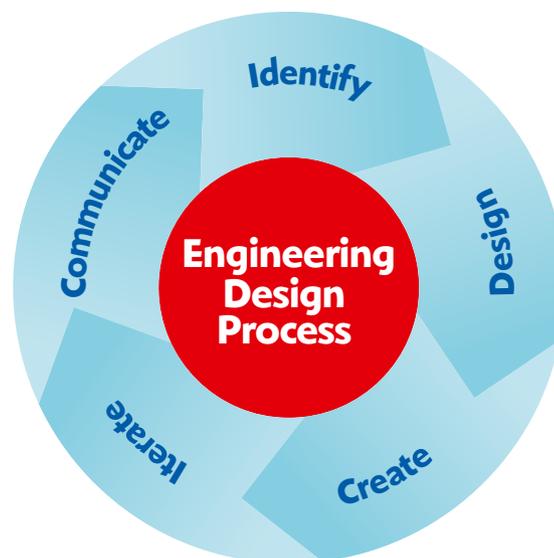
During the sessions, the team will experience the **engineering design process**. The team will identify, design, and create

solutions and test, iterate, and improve them. The team will then share and communicate what they learned with others. The rubrics used in judging capture the engineering design process used to create both the robot and Innovation Project solutions.

Working as a Team

The team will create their robot to compete in the Robot Game and design their Innovation Project solution. Teammates should be encouraged to work with each other, listen to each other, take turns, and share ideas.

Team roles are outlined in the *Engineering Notebook*. Using roles helps your team function more efficiently and ensures that everyone on the team is involved.



Overview

How to Use this Guide

The 12 sessions outlined give your team a guided experience in *FIRST*® LEGO® League Challenge. The sessions are designed to be flexible so that teams of varying experiences can use the materials. In general, plan for each session to last 120 minutes, but each session can be adjusted to meet your own implementation needs.

Your role is to facilitate and guide the team during the sessions to complete the team tasks. Besides the main tasks, there is an introduction and a very important share session, where the team meets around the mat to discuss what they have learned. Finally, the team will clean up and put away their materials. The tips within this guide are suggestions, and you may not want to follow all of them. Remember to do whatever is best for you and your implementation.

FIRST® Core Values

The *FIRST*® Core Values are the cornerstones of the program. They are among the fundamental elements of *FIRST* LEGO League. By embracing the Core Values, children use discovery and exploration of the theme in each session and learn that helping one another is the foundation of teamwork. It is important that the children have fun. The more playful the sessions are, the more motivated the children will be.

Gracious Professionalism® is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community. The team's Core Values and *Gracious Professionalism* will be evaluated during Robot Game matches and during the judging session at the tournament. The team demonstrates *Coopertition*® by showing that learning is more important than winning and they can help others even as they compete.



We found we were stronger when we worked together.



We embraced our differences and ensured we all felt welcomed.



We used creativity and persistence to solve problems.



We enjoyed and celebrated what we did!



We explored new skills and ideas.



We applied what we learned to improve our world.

Session Layout

EVERY SESSION STARTS WITH AN INTRODUCTION AND ENDS WITH A SHARE ACTIVITY. DETAILS FOR THESE ACTIVITIES ARE GIVEN IN THE SESSION PAGES THAT FOLLOW, ALONG WITH NOTES AND TIPS TO HELP YOU RUN THE SESSION.

	Introduction (10 minutes)	Team Tasks (100 minutes)		Share (10 minutes)
Session 1	Introduction to Challenge	Robot Lesson 1	Efficiency Project Spark	Share
Session 2	Inclusion Examples	Robot Lesson 2	Safety Project Spark	Share
Session 3	Goals and Processes	Robot Lesson 3	Access Project Spark	Share
Session 4	Discovery Examples	Robot Lesson 4	Connections Project Spark	Share
Session 5	Team Name and Logo	Guided Mission	Identify Project	Share
Session 6	Teamwork Examples	Pseudocode and Mission Strategy	Project Planning	Share
Session 7	<i>Gracious Professionalism</i> [®]	Solve Missions	Develop Project Solution	Share
Session 8	<i>Coopertition</i> [®] Examples	Solve Missions	Evaluate and Test Project Solution	Share
Session 9	Innovation Examples	Iterate and Improve Robot Solution	Iterate and Improve Project Solution	Share
Session 10	Impact Examples	Iterate and Improve Robot Solution	Plan Project Presentation	Share
Session 11	Team Playing Card	Plan Robot Design Explanation	Practice Project Presentation	Share
Session 12	Fun Examples	Practice Robot Game Matches	Practice Full Presentation	Share