



EXPLORE

# TEAM MEETING GUIDE



*FIRST*<sup>®</sup> LEGO<sup>®</sup> League  
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The **LEGO** Foundation 



# Guide Basics

## How to Use this Guide

The 12 sessions outlined give your team a guided experience in *FIRST*® LEGO® League Explore. Plan for each session to last 60 minutes, but you may adjust this to meet your own implementation needs. Your role during each session is to lead the introduction and facilitate the group and team activities.

## Working as a Team and in Groups

For most sessions, the team is divided into two groups, May's Group and Marco's Group. The team will work together to create their team model and team poster.

If you are working with more than one team at one time, make sure that you have all the materials listed on page 4 for EACH team. Each team should have no more than six students. See page 7 for management tips.

## Available Resources

Your country might have a specific *FIRST* LEGO League website, which you can find by going to [firstlegoleague.org](http://firstlegoleague.org) and clicking your region on the world map. To find available resources, visit the [firstinspires.org](http://firstinspires.org). Sign up for email blasts from *FIRST* for news and blogs and follow us on social media.

### Resources

<b>LEGO Support</b>	<a href="http://education.lego.com/en-us/support">education.lego.com/en-us/support</a> Phone: (800) 422-5346
<b>Main Websites</b>	<a href="http://firstlegoleague.org/">firstlegoleague.org/</a> <a href="http://firstinspires.org/robotics/fl">firstinspires.org/robotics/fl</a>
<b>Team Resources</b>	<a href="http://firstinspires.org/resource-library/fl/explore/team-management-resources">firstinspires.org/resource-library/fl/explore/team-management-resources</a>
<b>General Support Questions</b>	<a href="mailto:flexplore@firstinspires.org">flexplore@firstinspires.org</a>
<b>Equity, Diversity, &amp; Inclusion</b>	<a href="http://firstinspires.org/about/diversityinclusion">firstinspires.org/about/diversityinclusion</a>
<b>Youth Protection</b>	<a href="http://firstinspires.org/resource-library/youth-protection-policy">firstinspires.org/resource-library/youth-protection-policy</a>
<b>LEGO Education Teacher Community</b>	<a href="http://community.lego.education.com">community.lego.education.com</a>

# What Does the Team Need?

## LEGO® Education WeDo 2.0 Set



## Electronic Device

Your team will need a compatible Bluetooth-enabled device like a laptop, tablet, or computer. To view system requirements and download software, visit [legoeducation.com/downloads](http://legoeducation.com/downloads).

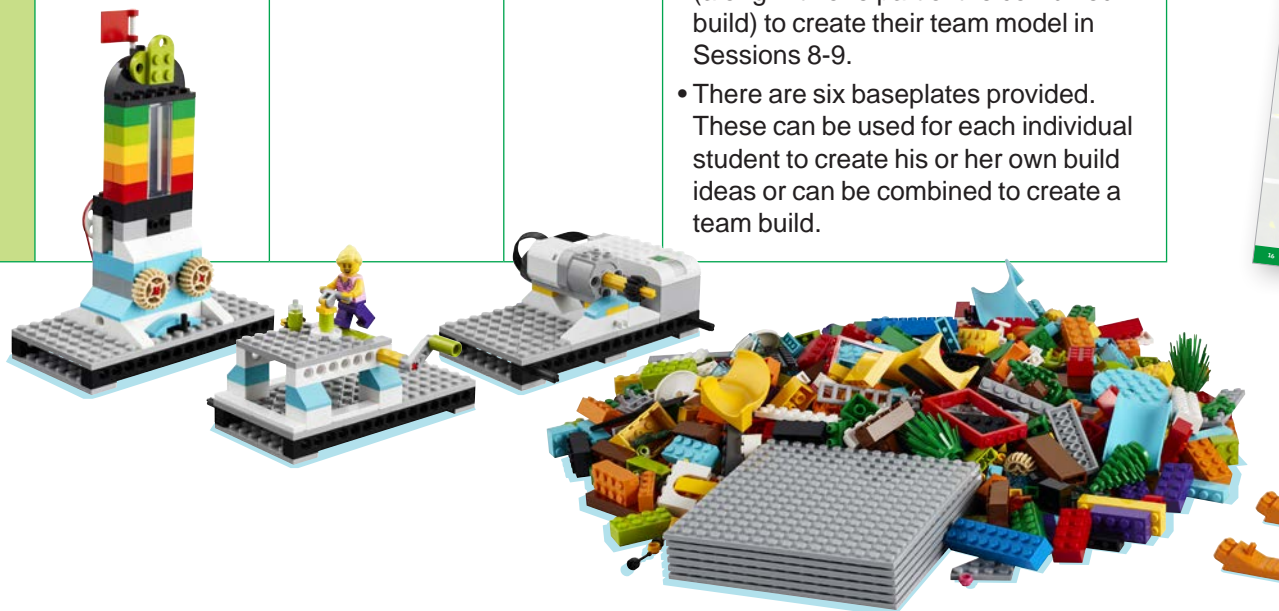
## Team Poster Supplies

Each team will need a large poster board and various art supplies and materials to create their team poster in Sessions 10-11.

## PLAYMAKERS<sup>SM</sup> Explore Set

Each team will get one PLAYMAKERS<sup>SM</sup> Explore Set. Leave the LEGO® elements in their plastic bags until the sessions in which they are needed.

	Heart Game	Treadmill	Motor and Hub Build	Prototyping Pieces
Bag	1	2	3	4
Book	1	2	2	-
Session Built	May's Group: 2 Marco's Group: 5	May's Group: 3 Marco's Group: 6	Team: 8	<ul style="list-style-type: none"> <li>• These are used during Sessions 2-7 to build solutions to the design challenges.</li> <li>• The team will use these elements (along with one part of the combined build) to create their team model in Sessions 8-9.</li> <li>• There are six baseplates provided. These can be used for each individual student to create his or her own build ideas or can be combined to create a team build.</li> </ul>



# Engineering Notebook Explained

Read the *Engineering Notebook* carefully. Each person on the team should have one. It contains all the information the team needs and guides them through the sessions. The tips in this *Team Meeting Guide* will direct you how to support each session.



## Getting Started Pages

- Welcome
- Team Journey
- Challenge Story
- Core Values
- Inspiration Toolkit



## Additional Pages

- Empty Lot Drawing Space
- Park Drawing Space
- Obstacle Course Drawing Space
- Find Your Projects
- Programming Block Descriptions
- Career Connections

# Session Layout

	Introduction (10 minutes)	Group and Team Tasks (35 minutes)		Share and Clean Up (15 minutes)
Session 1	Let's Discover	Whole Team: Explore Challenge	Whole Team: Build Models	Share
Session 2	Coach Says!	May's Group: Heart Game	Marco's Group: Cooling Fan	Share
Session 3	Walk and See	May's Group: Treadmill	Marco's Group: Moving Satellite	Share
Session 4	Act It Out	May's Group: Combine Models	Marco's Group: Spy Robot	Share
Session 5	Human Robot	May's Group: Cooling Fan	Marco's Group: Heart Game	Share
Session 6	Let's Dance	May's Group: Moving Satellite	Marco's Group: Treadmill	Share
Session 7	Kid Robot	Marco's Group: Spy Robot	Marco's Group: Combine Models	Share
Session 8	Have an Impact	Whole Team: Code Model	Whole Team: Build Motor & Hub	Share
Session 9	Let's Innovate	Whole Team: Build Team Model	Whole Team: Code Team Model	Share
Session 10	Be Inclusive	Whole Team: Create Plan	Whole Team: Design Poster	Share
Session 11	Go Team	Whole Team: Create Poster	Whole Team: Finish Poster	Share
Session 12	Let's Have Fun	Whole Team: Prepare to Share	Whole Team: Get Ready for Event	Share

# General Management Tips

## COACH TIPS

- Determine your timeline. How often will you meet and for how long? How many meetings will you have before your official event?
- Set team guidelines, procedures, and behaviors for your meetings.
- Get into the mind-set that the team should be doing most of the work and learning. You are there to facilitate their journey and remove any major obstacles.
- Celebrate the failures and every success, no matter how small.

## TEAM MANAGEMENT

- When the team is working with the Explore set, you could use these roles:
  - LEGO element finder
  - Builder
  - Checker
- When the team is working with the WeDo 2.0 set, you could use these roles:
  - LEGO element finder
  - Builder
  - Programmer
- Provide extra drawing or grid paper to the team to write and draw their ideas.
- There are template pages of the empty lot, park, and grid lines in the *Engineering Notebook* that could be copied and provided to teams.

## TEACHER TIPS

- If you are running this program with a classroom of students, place them into teams of four.
- If you are implementing during the school day, adapt the sessions to fit your needs.
- Number and label the LEGO® sets. Assign each team a set for the whole time.
- Have teams name their Smarthubs. They can use tape to identify them.
- If you aren't sending all your teams to an official event, check out the *Class Pack Festival Guide* for how to host your own event for your teams.

## MATERIAL MANAGEMENT

### LEGO Parts

- Place any extra or found LEGO pieces in a cup. Have kids who are missing pieces come to the cup to look for them.
- Wait to dismiss your team until you look over their LEGO set.
- The lid of the LEGO set can be used as a tray to keep pieces from rolling away.
- Use plastic bags to store any unfinished builds and their pieces between sessions.
- Designate a storage space for the builds and WeDo 2.0 container.

# Pre-Session Checklist

- Make sure you have a Bluetooth-enabled device with the WeDo 2.0 app or software installed.
- Unpack the WeDo 2.0 set and sort the LEGO® elements into the tray.
- Make sure the Smarthub has batteries in it.
- Familiarize yourself with the contents of the Explore set. When you get to Sessions 2-7, you will see that each group needs a specifically numbered bag and book.
- Read over the *Engineering Notebook* and this guide to gain an understanding of the materials.
- Explore the *FIRST*® Core Values. These are the essential foundation for your team.
- Watch the *FIRSTLEGO* League Explore Season Launch video and other videos on the *FIRST* LEGO League YouTube channel.
- Think about any adult experts that could visit the team and talk about the theme.
- Think about places in your community where the team could visit to help them think about the task of changing spaces so that everyone can be more active there.



## New to Building and Coding?

If the team is new to using WeDo 2.0, it would be beneficial to take some time for them to get acquainted with building and coding with the set. Here are suggested activities that the team could complete before starting the session:

- 1. Introduction**
- 2. Getting Started Project: Glowing Snail**



# Session 1

## Outcomes

- All students on the team will be able to list their favorite activities in which they move and play and will draw a picture of themselves doing that activity.
- All students on the team will be able to draw a design of and build a LEGO® model of their favorite activity on their individual baseplate.

### 1. Introduction:

Session 1: Let's Discover

Details for each of the Introduction activities are provided on pages 21-24.



2. There are six baseplates in the Explore set. Give one to each student.
3. Introduce the prototyping pieces (Bag 4) to the team. They will use these to create their models. Do NOT open any other bags.
4. Provide extra scrap paper as needed for the team to draw and write their ideas.

**Session 1** WHOLE TEAM

Getting moving helps your heart get healthy and strong!

When you get moving, your heart rate goes up.

I like to run at the dog park!

Write your ideas above.

**2** Find the prototyping pieces and baseplates from the Explore set.

- List different ways you like to play and get your body moving.

Where do you like to play and be active?

What games do you like to play?

- Pick your favorite activity and draw a picture of yourself doing it. Show where you are.
- Draw how you would build a LEGO® design of this activity.
- Build a design of your drawing on your own baseplate.
- Share your drawing and what you built with your team.

**THIS IS ME:**

**4**

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### Guiding Questions

- How does your favorite activity help raise your heart rate?
- Where do you play your favorite activity?

### Cleanup Pointers

- The LEGO models built should be taken apart. The prototyping pieces could be placed back in the Explore box or in a container labeled "Prototyping Pieces."

# Sessions 2 and 5

## Outcomes

- The group will be able to build the heart game. They will be able to build a solution for a game for May and Marco that will raise their heart rate.
- The group will be able to build the cooling fan and program it. They will be able to create a new code with the provided coding blocks and adapt the cooling fan design.

### Introduction:

Session 2: Coach Says!  
Session 5: Human Robot

1. The group will need Book 1 and Bag 1 located in the Explore set.
2. Each group is given a place to use as the location for their solution to Marco's question.
3. You could provide additional scrap paper or copies of the drawing pages for the team to use if needed.
4. One full page of drawing space is provided for both the empty lot and the park for use across multiple sessions.
5. Only Bag 4 should be used to build the solution to the question presented by Marco.

**MAY'S GROUP**  
Place: Empty Lot

**MARCO'S GROUP**  
Place: Park

**Session 2**

**Session 5**

Marco and I want to race! When our heart rates go up, the flag goes up!

Can you build a game that we can both play that will raise our heart rate?

**Heart Game**

**Find your Explore set.**

- 1  Follow the build instructions in Book 1 to make the heart game.
- 2  Turn the crank. Watch what happens to the flag!
- 3  Think about Marco's question and write your ideas in the box.
- 4  Be sure to think about your group's listed place.
- 5  Draw your design on page 16 or 17.
- 6  Use your prototyping pieces to build a fun solution.
- 7  Share what you did with the team.

**THOUGHTS AND IDEAS**

I want to play the game too!

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### Guiding Questions

- How could you create a fun game to get people more active in your community?
- What solution did you build to answer Marco's question?
- What do you want your code to make the model do?
- How did you change the design of the cooling fan?

### Cleanup Pointers

- The cooling fan should be taken apart and the LEGO® elements returned to the WeDo 2.0 set.
- The heart game should remain assembled for Session 4 (May's Group) and Session 7 (Marco's Group) to be combined with the treadmill.
- The solution built with the prototyping pieces should be taken apart and elements stored.

1. Make sure you have the WeDo 2.0 app loaded on the device before this session.
2. Instructions for accessing Getting Started projects are on page 26 in the *Engineering Notebook*.
3. If a group is short on time, you could have them complete the Getting Started project only.
4. Get the team in the habit of sorting the WeDo 2.0 elements back into the set at the end of each session.
5. The coding blocks are deliberately placed in the incorrect coding sequence. A sample solution is provided here.

**MARCO'S GROUP** **Session 2** **MAY'S GROUP** **Session 5**

- 1 Find your WeDo 2.0 set and device.
  - Open the WeDo 2.0 app.
- 2 Complete the Getting Started project: Cooling Fan.
  - Answer Max's question in the box below.
- 3 Change the code you created!
- 4 Change the build of the cooling fan.
  - Can you increase the fan speed?**
  - Can you stop the fan?**
  - Change the build of the cooling fan.
  - Can you change the blades?**
  - Make the fan taller?**
  - Draw your design on page 30.
  - Share what you did with the team.

Can you make your own code for the cooling fan?

You could use the blocks below!

5 **Sample Solution**

Explain how you could use these blocks to change the code you created!

PLAYMAKERS<sup>SM</sup> 11

### Share

- Get your team together to share what they did in the session.
- Have the group show the coding skills they learned. Have them explain how they changed the code and the design.
- Have the group demonstrate how the heart game works. Have them explain their designs and solutions for the challenge presented by Marco.

# Sessions 3 and 6

## Outcomes

- The group will be able to build the treadmill. They will be able to build a solution for different play stations for May and Marco.
- The group will be able to build and program the moving satellite. They will be able to create a new code with the provided coding blocks and adapt the moving satellite design.

### Introduction:

Session 3: Walk and See  
Session 6: Let's Dance

1. The group will need Book 2 and Bag 2 located in the Explore set.
2. You could provide examples of different activity stations like those in the gym, at a park, or on a playground.
3. The Inspiration Toolkit page in the *Engineering Notebook* on page 7 is a great resource for real-life examples and ideas.
4. Use the prototyping pieces to build the solution to the question presented by Marco.

**MAY'S GROUP**  
Place: Empty Lot

**MARCO'S GROUP**  
Place: Park

**Session 3**

**Session 6**

Marco and I wait for the bus each day. There's a park and an empty lot right by it.

These could be fun places to play! Can you design different play stations like the treadmill for us?

**Treadmill**

**Crank**

**Find your Explore set.**

- 1  Follow the build instructions in Book 2 to make the treadmill.
- Turn the crank to move the green roller. This shows how our leg power can be changed into motion.
- Set the treadmill aside.
- 2  Think about Marco's question and write your ideas in the box.
- 3  Be sure to think about your group's listed place.
- Draw your design on page 16 or 17.
- 4  Use your prototyping pieces to build a fun solution.
- Share what you did with the team.

**THOUGHTS AND IDEAS**

I want to have a go!

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### Guiding Questions

- How does the treadmill build compare to the real-life treadmill?
- How does your solution answer Marco's question?
- What do you want your code to make the build do?
- How did you change the design of the moving satellite?

### Cleanup Pointers

- The moving satellite should be taken apart and the LEGO® elements returned to the WeDo 2.0 set.
- The treadmill should remain assembled for Session 4 (May's Group) and Session 7 (Marco's Group) to be combined with the heart game.
- The solution built with the prototyping pieces should be taken apart and elements stored.

1. The group will use various motor blocks to code the motor direction and duration.
2. If a group is short on time, you could have them complete the Getting Started project only.
3. You could have the group write the sequential steps for the code before coding in the app.
4. Get the team in the habit of sorting the WeDo 2.0 elements back into the set at the end of each session.
5. The coding blocks are deliberately placed in the incorrect coding sequence. A sample solution is provided here.

**MARCO'S GROUP** **MAY'S GROUP**

**Session 3** **Session 6**

Find your WeDo 2.0 set and device.

- 1  Open the WeDo 2.0 app.
- 2  Complete the Getting Started project: Moving Satellite.
- 3  Answer Max's question in the box below.
- 4  Change the code you created!

**3 Can you turn the satellite for 10 seconds?**

**Can you turn the satellite the other way?**

**4  Change the build of the moving satellite.**

**Can you change the satellite shape? Make it bigger?**

Draw your design on page 30.

Share what you did with the team.

Can you make your own code for the satellite?

You could use the blocks below!

**5 Sample Solution**

Explain how you could use these blocks to change the code you created!

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### Share

- Get your team together to share what they did in the session.
- Have the group show the coding skills they learned. Have them explain how they changed the code and the design.
- Have the group demonstrate how the treadmill works. Have them explain their designs and solutions for the challenge presented by Marco.

# Sessions 4 and 7


## Outcomes

- The group will be able to combine the heart game and treadmill. They will be able to build a solution for a path for May and Marco.
- The group will be able to build the spy robot and program it. They will be able to create a new code with the provided coding blocks and adapt the spy robot design.


## Introduction:

Session 4: Act It Out  
Session 7: Kid Robot

1. The group will need their assembled heart game and treadmill. If these builds have been taken apart, have the group build them again.
2. The group will need Book 2 located in the Explore set. No extra pieces are needed for assembly.
3. The goal is for the group think about making sure their path is accessible for both the bicycle and wheelchair.
4. Use the prototyping pieces to build the solution to the question presented by Marco.
5. A bicycle and wheelchair are located in Bag 4 and could be physically shown moving through the built solution.




**MAY'S GROUP**  
Place: Empty Lot




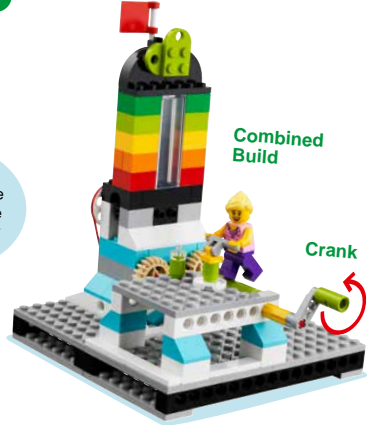
**MARCO'S GROUP**  
Place: Park

### Session 4



### Session 7





**Combined Build**

Crank


We want to race! I'm going to ride my bike. When our heart rates go up, the flag goes up on the heart game!

Can you build a path for us where we can both race to raise our heart rate?

**Find your Explore set.**

- 1  Find your assembled heart game and treadmill.
- 2  Follow the build instructions in Book 2 to combine the heart game and treadmill.
- 3  Turn the crank on the treadmill. How does the flag move?
- 4  Think about Marco's question and write your ideas in the box.
- 5  Be sure to think about your group's listed place.
- 6  Draw your design on page 16 or 17.
- 7  Use your prototyping pieces to build a fun solution.
- 8  Share what you did with the team.

**THOUGHTS AND IDEAS**



Be sure your path is built for May and Marco's wheels!

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## Guiding Questions

- What places could you create paths to play in your own local community?
- How do you make sure your path is accessible and inclusive for everyone?
- What do you want your code to make the build do?
- How did you change the design of the spy robot?

### Cleanup Pointers

- The spy robot should be taken apart and the LEGO® elements returned to the WeDo 2.0 set.
- At the end of Session 4, the treadmill and heart game should be taken apart. Put the pieces for each build in their own bag. The combined build can stay assembled after Session 7.
- The solution built with the prototyping pieces should be taken apart.

1. This group will learn about coding to detect motion with the motion sensor and using sound.
2. If a group is short on time, you could have them complete the Getting Started project only.
3. You could have the group write the sequential steps for the code before coding in the app.
4. Get the team in the habit of sorting the WeDo 2.0 elements back into the set at the end of each session.
5. The coding blocks are deliberately placed in the incorrect coding sequence. A sample solution is provided here.

### Share

- Get your team together to share what they did in the session.
- Have the group show the coding skills they learned. Have them explain how they changed the code and the design.
- Have the group demonstrate how the combined build works. Have them explain their designs and solutions for the challenge presented by Marco.

# Sessions 8 and 9

## Outcomes

- The team will be able to finalize the combined build and program the flag on it to rise.
- The team will be able to draw their obstacle course design and label its required parts.
- The team will be able to create their team model of an obstacle course.

### Introduction:

Session 8: Have an Impact  
Session 9: Let's Innovate

1. The whole team will work together on these sessions. Place the team into two groups to complete the tasks.
2. The tasks listed on this page should take 30 minutes to complete in Session 8. The rest of the time in Sessions 8 and 9 should be devoted to the team model.
3. The team will need Book 2 and Bag 3 located in the Explore set.
4. The team will apply coding concepts they learned in Sessions 2-7 to create their programs.

## Sessions 8 and 9

**WHOLE TEAM 1**



**Combined Build**

Can your team code your combined build?



**Motor and Hub Build**

Can your team motorize the combined build?

- 4** Find your WeDo 2.0 set and device.
  - Find the WeDo 2.0 app.
- 5** Use the blocks below to create a code to raise the flag to the top on the heart game.
  - Work as a team to code solutions to these challenges!
- 6** 1. Raise the flag and then bring it all the way back down.
- 7** 2. Add a sound to celebrate when the flag is at the top.
- 2** Find your Explore set and WeDo 2.0 set.
  - Follow the build instructions in Book 2 to make the motor and hub build.
  - Find your combined treadmill and heart game.
  - Connect it with the motor and hub build.
- 3** Work as a team to complete the tasks!

You could use these blocks to create your new code!









## Sample Solutions


**6**



**8**



**7**





### Guiding Questions

- What the strengths and the weaknesses of your design?
- Describe the process you used to create your team model.
- What do you think is the most important part of your team model?

### Cleanup Pointers

- The team model will remain assembled from this point forward until the event.

1. There are six baseplates in the Explore set. You could have each team member build a part of the obstacle course.
2. The team model should be able to fit on a table and be easily transportable.
3. The team model can use extra LEGO® bricks, minifigures, baseplates, and other LEGO elements. You may NOT use glue, paint, or art supplies.
4. The team can motorize or use the crank on the heart game. The use of the treadmill is optional.
5. The team could reuse the code from Session 8, or they could motorize and code a brand-new part in their model.

**Sessions 8 and 9** WHOLE TEAM

Find your Explore set, combined build, WeDo 2.0 set, and device.

- Think about the questions.
- Brainstorm ideas for each question.
- Look over the list of required parts below.

**1** Draw your obstacle course design on pages 20-21. Label all the required parts and the places the course is found.

Can you design an obstacle course for us to play on and then build it as your team model?

Can you include fun activities that would raise our heart rates?

Could your obstacle course be built in one of these places or maybe in all of them?

**Team Model** **2**

Park Empty Lot Choose a Place

**Required Parts:**

- 3**  Be made of only LEGO® elements.
- 4**  Include ONE part of the combined build.
- Have ONE motorized part.
- 5**  Use LEGO Education WeDo 2.0 coding.

PLAYMAKERS<sup>SM</sup> 19

### Share

- Get your team together to share what they did at the end of each session.
- Session 8: Have the team explain the code created for each challenge and demonstrate on the combined build. They could share what progress has been made on the team model.
- Session 9: Have the team review the list of required parts and identify them on the team model.

# Sessions 10 and 11

## Outcomes

- The team will be able to create a plan for what they will include on their team poster.
- The team will be able to design and create what they will include on their team poster.

## Introduction:

Session 10: Be Inclusive  
Session 11: Go Team

1. You will need to provide a large poster board and various art supplies. A trifold poster board works well.
2. The goal is for the team to create the board themselves. You can support them and provide insight.
3. Sample topics for the poster are provided for the students. They can choose to include whatever they want!
4. You could provide extra scrap paper for the team to draw and write their ideas for their team poster.

**Sessions 10 and 11** WHOLE TEAM

**1 Find your poster board and art supplies.**

- Brainstorm what you will put on your poster.
- Use the next page as a draft for your ideas.

**2 Work together as a team to create your poster.**

Make a team poster sharing what you learned during PLAYMAKERS<sup>SM</sup>!

Describe your team journey throughout the sessions.

You can use words, drawings, and photos on your poster.

**Team Poster**

Explore Create and Test Share

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## Guiding Questions

- What different challenges did you explore?
- What did you create and build?

## Cleanup Pointers

- Make sure you have a safe place to store the poster, especially if it needs to lay open to dry.

# Session 12

## Outcomes

- The team will be able to reflect on their PLAYMAKERS<sup>SM</sup> experience.
- The team will be able to create a plan for what to share at their final event.

## Introduction:

Session 12: Let's Have Fun

1. Look over the reviewing sheet. It is located on the Resources webpage. Ask your team practice questions to prepare for their event.
2. Every question on this page doesn't need to be answered. They are just to help your team feel ready for the event.
3. If you are not attending an official festival, you can still run your own festival or have an informal sharing event.
4. You could provide extra scrap paper for the team to write out what they plan to share at their event.

**Session 12** WHOLE TEAM

**1 Find your completed team model and team poster.**

- Talk about what your team would like to share at your event!
- Complete the next page to prepare for your event.
- Look over the reviewing sheet with your coach.

It's almost time for your event! There are many ways to share what you have learned.

You could take part in a *FIRST*® LEGO® League Explore Festival. Invite your family and friends to a special meeting or showcase.

No matter how you celebrate, have fun!

**3 Typical Event Setup**

I'm going to share what we explored.

I will explain the WeDo 2.0 code and how it motorizes the team model.

I can reflect on the different Core Values activities we did.

We will show how the poster captures our team journey!

I will describe the team model and the parts of the obstacle course.

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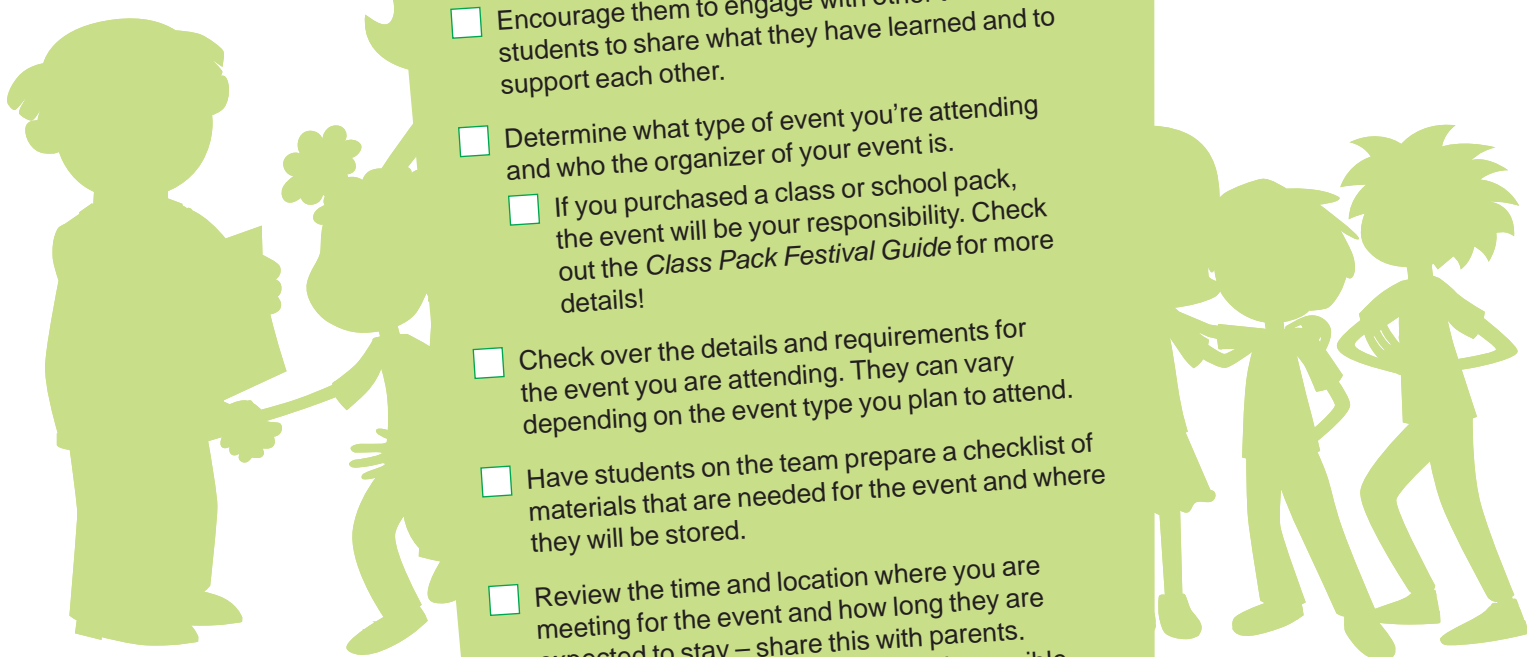
## Guiding Questions

- Can you explain the code you created for your motorized part?
- How does your team model relate to the challenge?

## Cleanup Pointers

- Make sure the team model and team poster are stored and ready to be transported to the event.

# Prepare for Your Festival!

- 
- A green silhouette illustration of five children. On the left, a boy stands holding a book. Next to him, a girl holds a large flower. In the center, a boy is shaking hands with the girl. On the right, a girl and a boy are talking, and another boy stands with his hands on his hips.
- The main goal of an event is for the team to have FUN and to feel that their work is valued.
  - Remind students that the event is also a learning experience and the goal is to have fun!
  - Encourage them to engage with other teams and students to share what they have learned and to support each other.
  - Determine what type of event you're attending and who the organizer of your event is.
  - If you purchased a class or school pack, the event will be your responsibility. Check out the *Class Pack Festival Guide* for more details!
  - Check over the details and requirements for the event you are attending. They can vary depending on the event type you plan to attend.
  - Have students on the team prepare a checklist of materials that are needed for the event and where they will be stored.
  - Review the time and location where you are meeting for the event and how long they are expected to stay – share this with parents. Encourage parents to attend if this is possible.

## Events Complete and All Done?

**Here are some tips for wrapping up after the last event your team will participate in:**

- Clean up and take apart team build. Make sure the WeDo 2.0 elements go back to their set.
- Inventory the WeDo 2.0 set to make sure all the pieces are there.
- Decide what to do with Explore Set elements.
- Allow time for the team to reflect on their experience.
- Hold a team celebration!

# Introduction Activities



These Introduction activities incorporate the *FIRST*® Core Values.

## Let's Discover

- Read the definition for **discovery** to the team.
- Talk about what **discovery** is. Have the team provide examples of this Core Value.
- Lead a discussion on ways your team could learn new skills and ideas.
- Have each student draw a picture that shows an example of **discovery** on the Core Values page in their *Engineering Notebook*.



## Let's Innovate

- Read the definition for **innovation** to the team.
- Talk about what **innovation** is. Have the team provide examples of this Core Value.
- Lead a discussion on ways your team has been innovative.
- Have each student draw a picture that shows an example of **innovation** on the Core Values page in their *Engineering Notebook*.



## Have an Impact

- Read the definition for **impact** to the team.
- Talk about what **impact** is. Have the team provide examples of this Core Value.
- Lead a discussion on ways your team can have an impact on others and their community.
- Have each student draw a picture that shows an example of **impact** on the Core Values page in their *Engineering Notebook*.



# Introduction Activities

These Introduction activities incorporate the *FIRST* Core Values.

## Be Inclusive

- Read the definition for **inclusion** to the team.
- Talk about what **inclusion** is. Have the team provide examples of this Core Value.
- Lead a discussion on ways your team can make sure everyone feels respected and included.
- Have each student draw a picture that shows an example of **inclusion** on the Core Values page in their *Engineering Notebook*.



## Go Team

- Read the definition for **teamwork** to the team.
- Talk about what **teamwork** is. Have the team provide examples of this Core Value.
- Lead a discussion on ways your team has learned to work together.
- Have each student draw a picture that shows an example of **teamwork** on the Core Values page in their *Engineering Notebook*.



## Let's Have Fun

- Read the definition for **fun** to the team.
- Talk about what **fun** is. Have the team provide examples of this Core Value.
- Lead a discussion on ways your team has had fun.
- Have each student draw a picture that shows an example of **fun** on the Core Values page in their *Engineering Notebook*.

# Introduction Activities

## Coach Says!

- Make a copy of the Coach Says! pages 25-26.
- Cut out each Coding Block on the sheet.
- Hold up each Coding Block square and have the team act out the motion listed for each block as practice.
- Say “Coach Says” then hold up a Coding Block square. The team should act out the action that each block represents without you telling them what to do.
- Continue holding up cards and have the team act it out. See how fast they can go!



## Human Robot

- Pick a starting and ending point in your meeting space. Split the team into pairs.
- Each pair should write the steps for you, the human robot, to get from the starting to ending point.
- Read each pair’s instructions and act out the EXACT steps until you no longer can or until you reach the ending point.
- Ask each pair if the outcome was what they expected. If it wasn’t, why not?
- Discuss how the robot will do exactly what the program tells it to do, not necessarily what the team wants or expects it to do.

## Let’s Dance

- Show the *FIRST*® LEGO® League’s “[Teamwork Makes the Dream Work](#)” video.
- Have the students work together to create dance moves to the video.
- Each student on the team could create their own move and then the team could combine all the moves into a team dance.
- Play the video again and have the team dance along with their new moves!



## Walk and See

- Go on a walk around your school, building, or other area nearby.
- Ask the team to point out all the different places where they can play and be active.
- Discuss what types of equipment they use and activities they do at these different locations.
- Let each student share about their favorite activities to do in the place listed for the session.
- Brainstorm ideas of what playful activities they could do in the space where they meet for their *FIRST*® LEGO® League Explore sessions.

# Introduction Activities

## Act It Out

- This is a variation of Coach Says! Call out an activity or sport and have the team act it out.
- You can have the team act out the motions in different ways: without moving their feet, with only their upper body moving, or with the whole body moving.
- Have the students find their heartbeat after each action to see if they have increased their heart rate.
- You could have each student take a turn and call out an activity and then have the team copy his or her movements.



## Kid Robot

- Create a maze or simple obstacle course in your meeting space or nearby location.
- Split the team into pairs with one being the human robot and one being the coder.
- Each student should write the steps to get the human robot through the maze or course.
- Have the pairs take turns being the robot and the coder and running the code they wrote.
- The human robot should act out the EXACT steps.

# Extension Activity Ideas

Students could try these activities in the program library.

### Sessions 2 and 5

- Motor Power
- Increase Speed
- Stop Motor

### Sessions 3 and 6

- Motor Direction and Motor Time
- Screen Joystick

### Sessions 4 and 7

- Sound
- Detect Motion
- Loop

- Provide books that relate to the challenge for the team to read.
- Plan a field trip (in person or virtual) to a place that relates to the challenge theme.

- Bring in an adult, such as a parent or teacher, who can talk about the importance of being active while having fun!
- Check out the [FIRST® LEGO® League YouTube channel](#) for videos and inspiration.



# Coach Says!



5

Walk forward for  
5 seconds



Stop moving



1

Walk forward  
slowly



9

Walk forward  
quickly

# Coach Says!



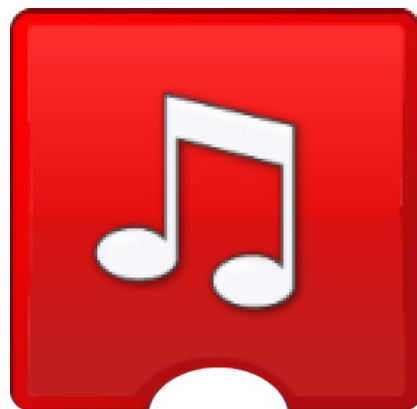
**Spin to the left  
(counterclockwise)**



**Spin to the right  
(clockwise)**



**Tilt your body  
side to side**



**Clap your hands**





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