

**FIRST  
LEGO  
LEAGUE**

EXPLORE

# ENGINEERING NOTEBOOK

**SUPER  
POWERED**

EMMO



# Team Journey

Explore the challenge



Learn about Core Values



Explore, create, test, and share as you go through the sessions

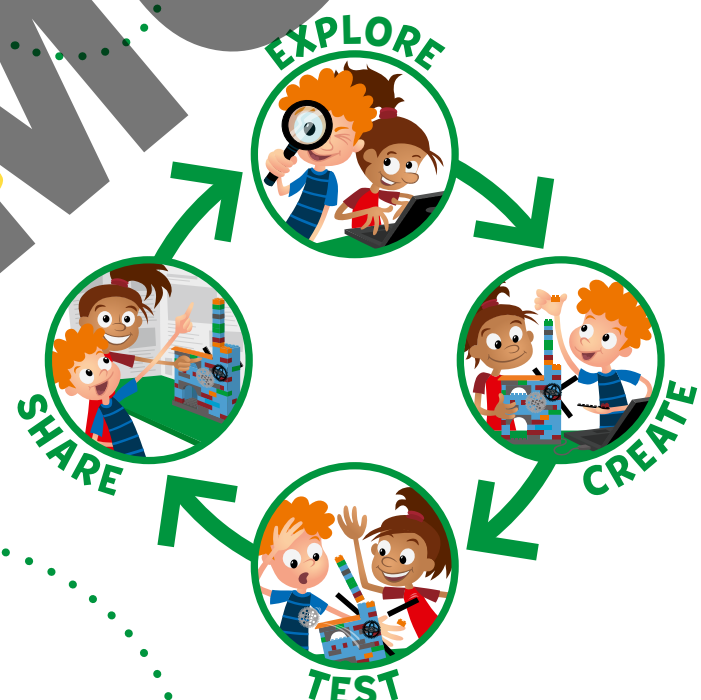
Create team model



Design team poster



Celebrate at an event



# Core Values

Show me how you use the Core Values throughout your experience!



## DISCOVERY

We explore new skills and ideas.

## INCLUSION

We respect each other and embrace our differences.

## INNOVATION

We use creativity and persistence to solve problems.

## TEAMWORK

We are stronger when we work together.

DEMO

## IMPACT

We apply what we learn to improve our world.

## FUN

We enjoy and celebrate what we do!



Draw or write an example of your team using each Core Value when directed in the sessions!

You will develop new skills as you work together.



## Activity 1 Tasks (15-20 minutes)

- Open the SPIKE™ Essential or WeDo 2.0 app. Complete your lesson.
- Make the model go in a different direction. Write down your ideas for how to change the program below.
- Modify the program based on your ideas.
- Run your new program. See what happens.

## Challenge

- Make the motor turn in both directions and code it to go faster and slower.

## Your team needs:



## Choose your lesson:



FIRST® LEGO® League  
Explore Unit:  
**Lesson 1**



Classroom Projects:  
**Cooling Fan**

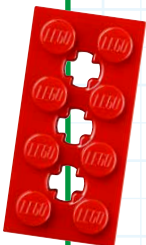
DEMO

Show me how you include everyone's awesome ideas!



## MY IDEAS

Write your ideas!



## Activity 1 Tasks (15-20 minutes)

- Open the SPIKE™ Essential or WeDo 2.0 app. Complete your lesson.
- Code the model to play a different sound or flash a light. Write down your ideas for how to change the program below.
- Change the existing program based on your ideas. Test it out!

## Challenge

- Code the robot to play a different sound or show a different light. Code the model's motor to be triggered using a sensor.

## Your team needs:



## Choose your lesson:



FIRST® LEGO® League  
Explore Unit:

### Lesson 2



Classroom Projects:

### Spy Robot

Show me your  
awesome coding  
skills!



DEMO

## MY IDEAS

Write your ideas!



# Team Poster

Show me how creative you can be!



Here's your chance to capture ideas for your team poster.

Sample Topics: *Explore, Create, Test, Share, Core Values, Team Journey*

A large grid area for a team poster, divided into four quadrants by a central vertical line and a horizontal line. A large, semi-transparent watermark reading "DEMO" is oriented diagonally across the center. In the middle of the grid, there is a vertical stack of five colorful rectangular blocks with a grid pattern and small white crosses, resembling building blocks. The colors from top to bottom are purple, red, yellow, green, and blue.

# Session 12

## Tasks (40 minutes)

- Gather 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.
- Practice your presentation.
- Communicate what you have learned with others.

You will be taking part in a *FIRST*® *LEGO*® League Explore Festival. Invite your family and friends to your special event!

Share what you have learned and how your team had fun!

## Sample Festival Setup

I'm going to share what we explored.

I will describe the team model.

I will explain the program and how it motorizes the team model.

We will show how the poster captures our team journey!

I can reflect on how our team used Core Values.





**FIRST**  
**ENERGIZE**  
SM

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