

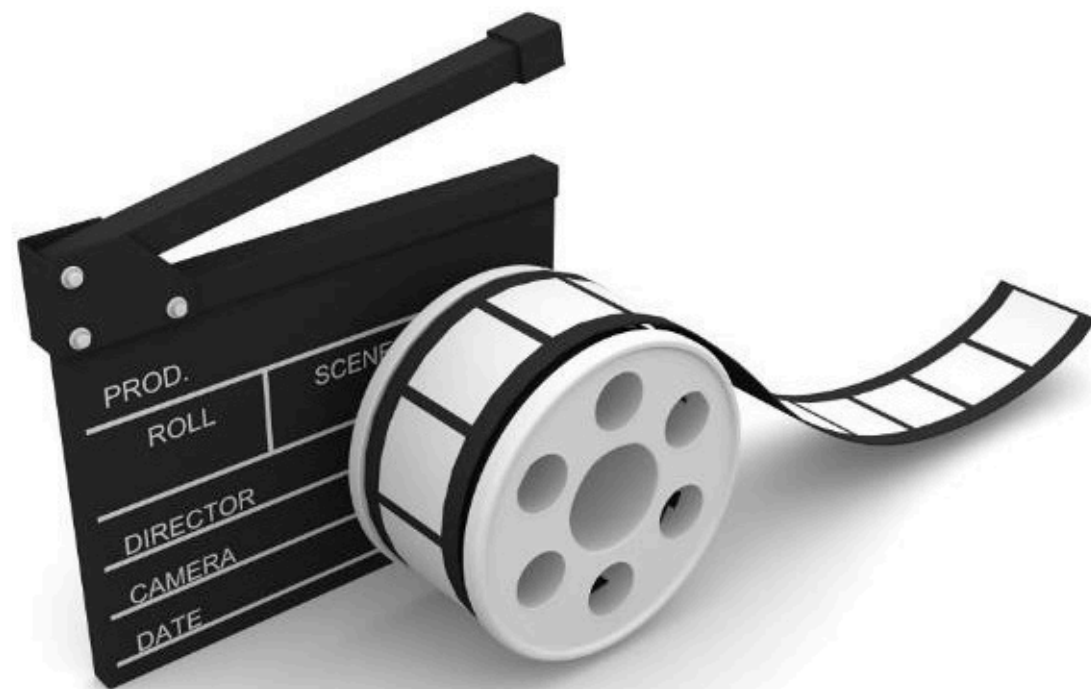
# Kamflix Club



# Let's Get Started



# What is *FIRST*® LEGO® League?



Visit the  
[FIRST® LEGO® League](#)  
[YouTube Channel](#)  
to watch the  
SUBMERGEDSM season  
launch video

# FIRST® Core Values



**Teamwork**

We found we were stronger when we worked together.



**Inclusion**

We embraced our differences and ensured we all felt welcomed.



**Innovation**

We applied what we learned to improve our world.



**Fun**

We enjoyed and celebrated what we did!



**Discovery**

We explored new skills and ideas.



**Impact**

We used creativity and persistence to solve problems.

# ***FIRST*® LEGO® League Challenge**

## **Overview**

### **CORE VALUES**

Demonstrate *FIRST*® **Core Values** in everything you do. Your team will be evaluated during the robot game and the judging session.



**Your team will:**

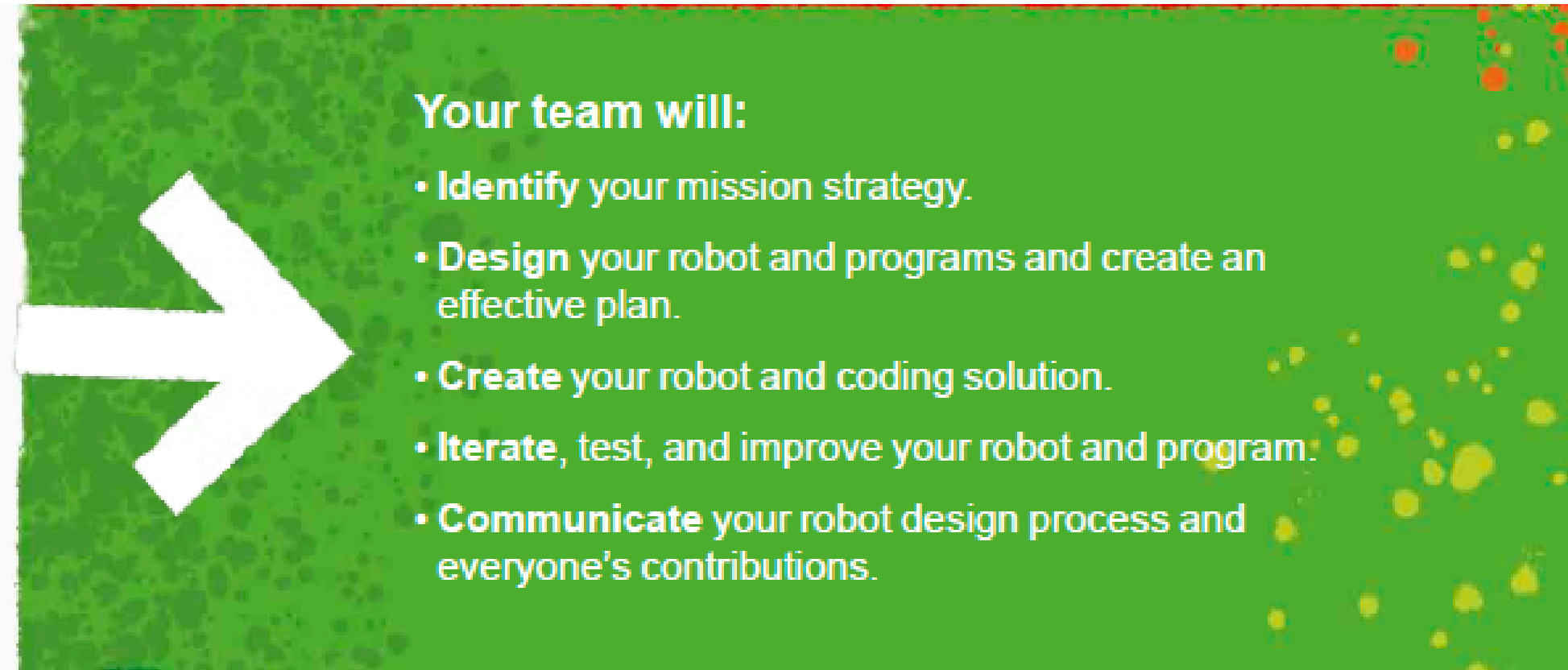
- Apply **teamwork** and **discovery** to explore the challenge.
- **Innovate** with new ideas about your robot and project.
- Show how your team and your solutions will have an **impact** and be **inclusive!**
- Celebrate by having **fun** in everything you do!

# ***FIRST® LEGO® League Challenge***

## **Overview**

### **ROBOT DESIGN**

Your team will prepare a short explanation on your robot design, programs, and strategy.



**Your team will:**

- **Identify** your mission strategy.
- **Design** your robot and programs and create an effective plan.
- **Create** your robot and coding solution.
- **Iterate**, test, and improve your robot and program.
- **Communicate** your robot design process and everyone's contributions.

# ***FIRST*® *LEGO*® League Challenge**

## **Overview**

### **ROBOT GAME**

Your team will have three 2.5-minute matches to complete as many missions as possible.



**Your team will:**

- Build the mission models and follow the field setup to put the models on the mat.
- Review the missions and rules.
- Design and build a robot.
- Explore building and coding skills while practicing with your robot on the mat.
- Compete at an event!



# ***FIRST*® *LEGO*® League Challenge**

## **Overview**

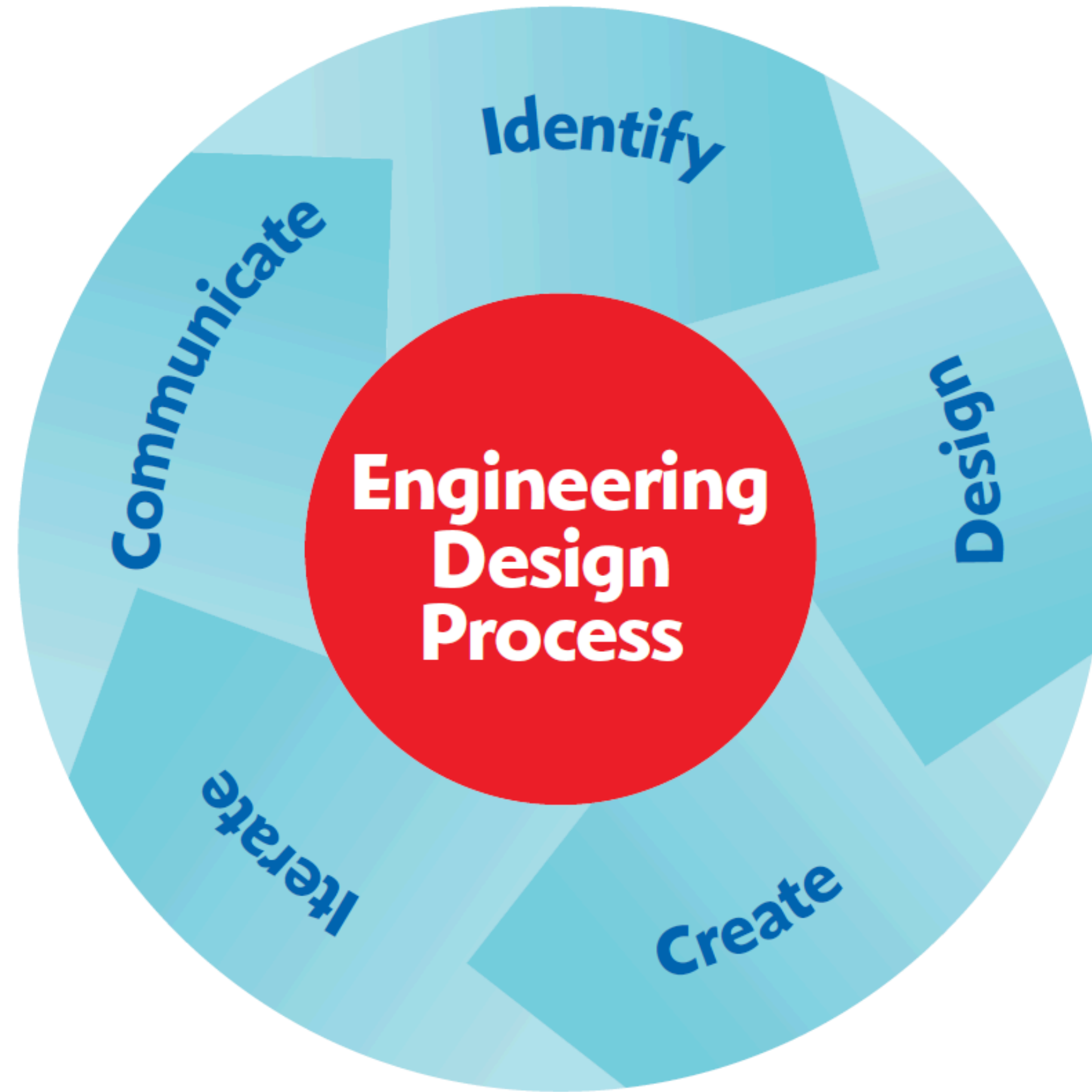
### **INNOVATION PROJECT**

Your team will prepare a live, engaging presentation to explain the work you have done on your innovation project.



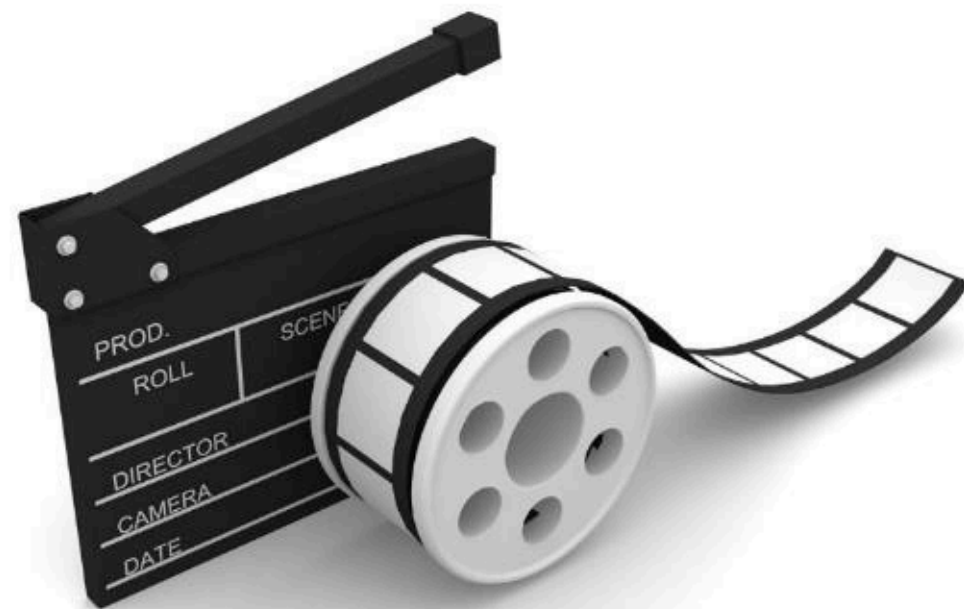
### **Your team will:**

- **Identify** and research a problem to solve.
- **Design** a new solution or improve an existing one based on your selected idea, brainstorming, and plan.
- **Create** a model, drawing, or prototype.
- **Iterate** on your solution by sharing it with others and collecting feedback.
- **Communicate** your solution's impact.





# SUBMERGED<sup>SM</sup>



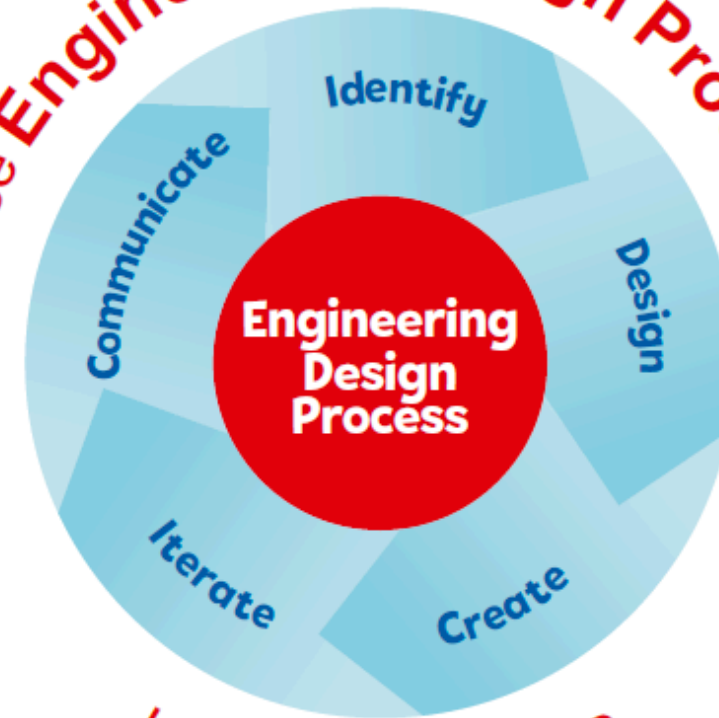
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# Team Journey

Design Your Innovation Project



Use Engineering Design Process



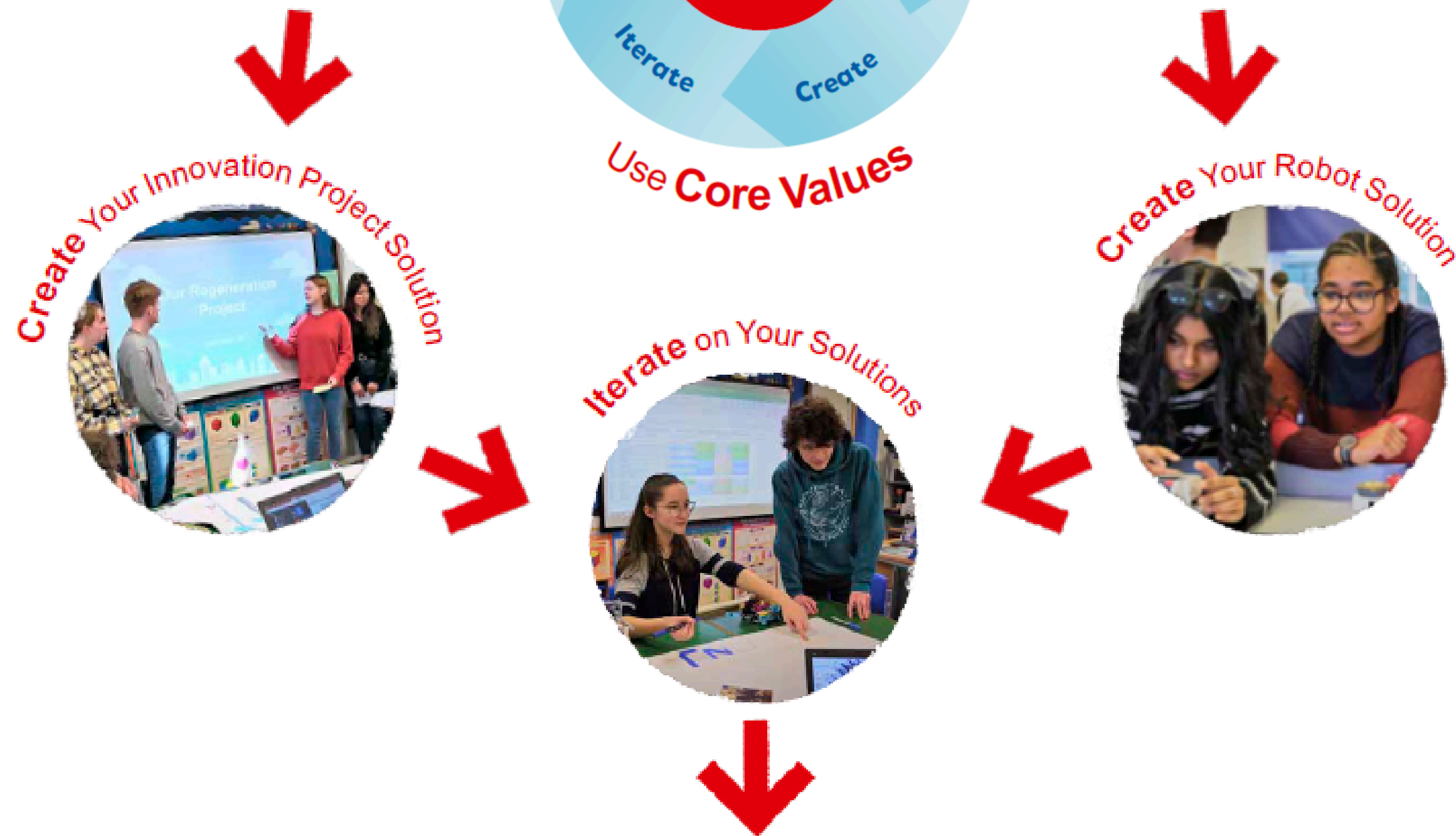
Use Core Values



Design Your Robot



# Team Journey



# Team Journey



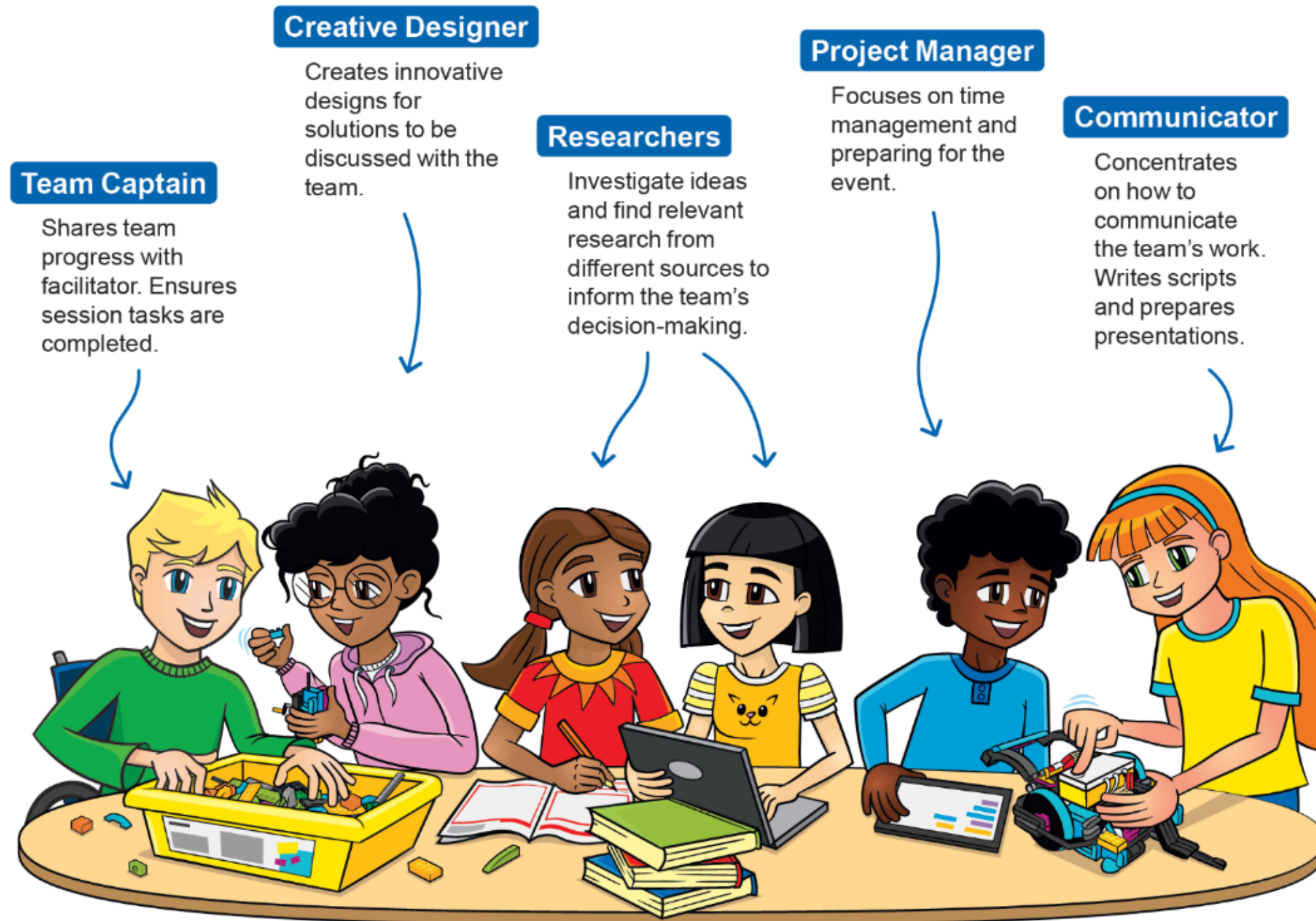
Communicate Your Solutions at Event  
Receive Feedback to Improve



Compete in Robot Game  
Have Fun and Celebrate!

# Team Roles

- What roles will you use on your team?





# Team Roles



## Material Manager

Gathers materials needed for session and returns materials.

## Builders

Assemble the LEGO mission models following the building instructions and build your robot.

## Mission Strategist

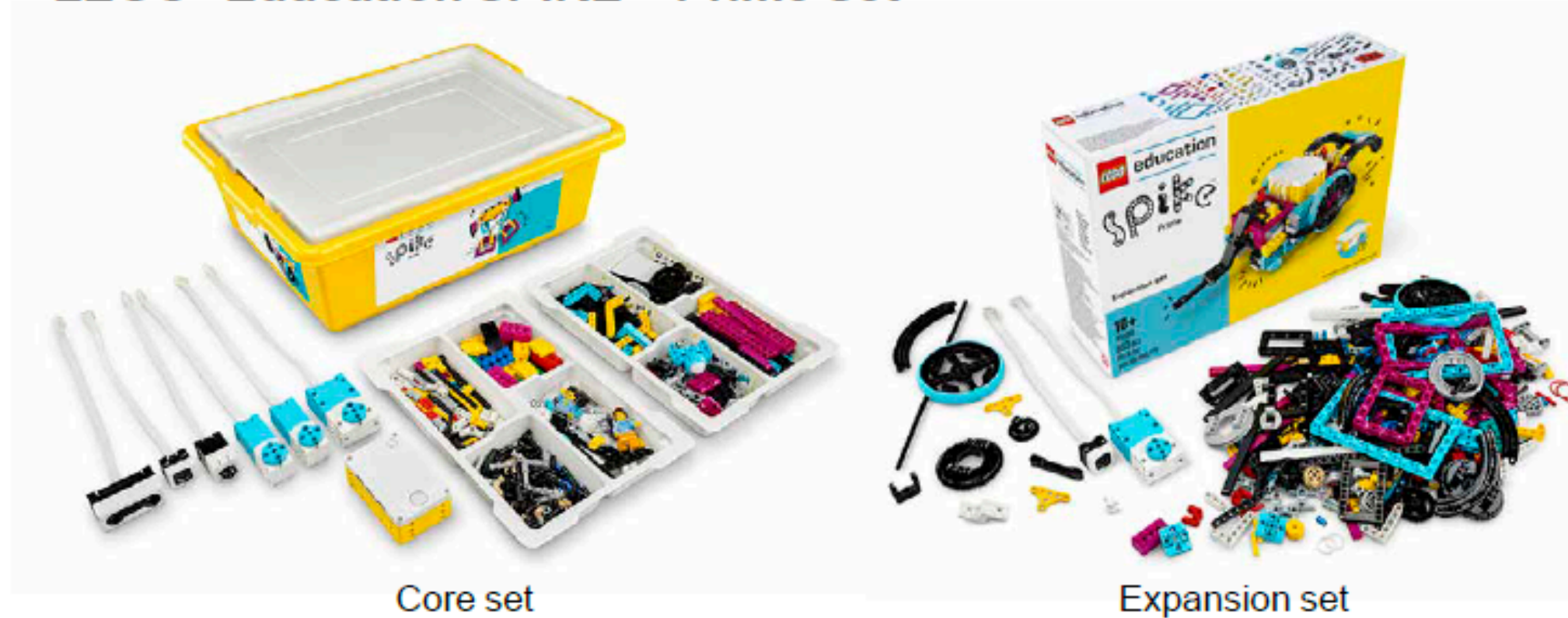
Analyzes the *Robot Game Rulebook* and leads team strategy discussions on which missions to attempt.

## Coders

Operate the device and creates the programs in the app.

# What Does the Team Need?

## LEGO® Education SPIKE™ Prime Set



**Note:** Other LEGO® Education sets such as MINDSTORMS® and Robot Inventor are also allowed.

## Electronic Devices

Each team will need two compatible devices such as a laptop, tablet, or computer. Prior to starting Session 1, you need to download the appropriate software (LEGO® Education SPIKE™ Prime or other compatible software) on to the device.







**Caution:** It's important to build the models as accurately as possible because practicing with incorrect models could cause problems. Work as a team to build the models, and check each other as you build.



**FIRST  
LEGO  
LEAGUE**  
CHALLENGE

## ENGINEERING NOTEBOOK



**FIRST  
LEGO  
LEAGUE**  
CHALLENGE

## ROBOT GAME RULEBOOK



# Connections

## Investigate Different Subjects

### Fields of Study

- Oceanography
- Marine Biology
- Coastal Management
- Marine Chemistry
- Geology
- Marine Technology
- Underwater Photography



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