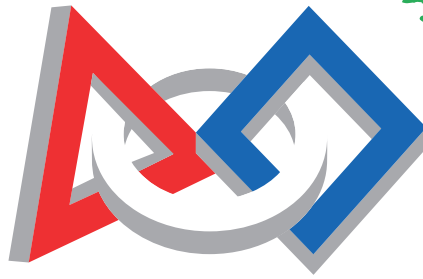


2023



HAWAII'  
**FIRST**<sup>®</sup>  
ROBOTICS

2023 FLL Challenge Championship & FLL Explore Festival  
Waialua High & Intermediate School • December 2, 2023

MASTER  
PIECE

SM

FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY

**FIRST**  
LEGO LEAGUE  
EXPLORE

**FIRST**  
LEGO LEAGUE  
CHALLENGE

**FIRST**  
TECH  
CHALLENGE

**FIRST**  
ROBOTICS  
COMPETITION

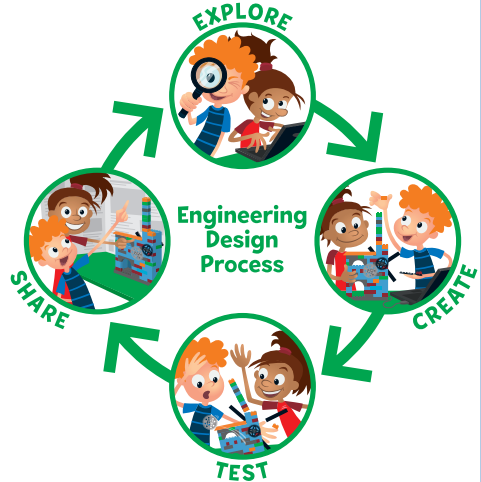


FIRST  
LEGO  
LEAGUE

EXPLORE

## Explore

Welcome to MASTERPIECE<sup>SM</sup>! The children explore how people share their hobbies and interests in creative and captivating ways. They learn about different places where people share their talents or go to enjoy a show. Experts from a variety of backgrounds are involved in every step of putting on a show from stage managers to performers. They share their own interests and build a place of their own design.



## Create and Test

The children build stages where different types of performances can take place. They explore coding and motorizing their team model. They add lights and sounds to their model to make it stand out and be engaging for the audience.

## Share

The children record their ideas and designs in their *Engineering Notebooks*. They share their builds and what they learned with others. Finally, they participate in the festival, where they share their team posters and team models with reviewers, families, and friends. Most importantly they...

### During the season, teams could:

- ✦ Discover real-world challenges and opportunities in the theme.
- ✦ Create a model and program it to make part of it move.
- ✦ Test and improve the model and code.
- ✦ Track their work in the Engineering notebook.
- ✦ Make a team poster that reflects the team's journey.
- ✦ Share the model and poster with reviewers at this Explore festival.
- ✦ Celebrate accomplishments with family and other teams **at this Explore festival!**

...HAVE  
FUN!



**FIRST  
LEGO  
LEAGUE**

**EXPLORE**

## **Participating Teams**

- 1675 HMS Dolphins 1
- 6357 HMS Dolphins 2
- 7788 Hawaii Kipapa Cougar Cubs 1
- 7789 Hawaii Cougar Cubs 2
- 25439 The Curious Monkeys
- 25524 Hawaii Cougar Cubs 3
- 26211 Hilo Scrappers
- 27227 Ko'olau-Bots
- 27361 The Imaginationeers
- 28912 Rockin' Wizards
- 28966 Holy Nativity School #1
- 28967 Holy Nativity School #2
- 28968 Holy Nativity School #3
- 29878 Oahu Longnecks (Advanced)
- 30039 Oahu Longnecks (Beginner)
- 30164 True Storey
- 30245 The Bookworms
- 30312 Robo Saints



**FIRST  
LEGO  
LEAGUE**

**CHALLENGE**

## Participating Teams

1578	<b>Masters of Melody</b> , Maunawili Elementary
1579	<b>Art-Techs</b> , Maunawili Elementary
2089	<b>HobBEEs</b> , Kalakaua Middle
2364	<b>ACTION team</b> , Holomua Elementary
2584	<b>Lady Knights</b> , Saint Joseph School
2585	<b>Knights</b> , Saint Joseph School
3523	<b>Blazing Robartists</b> , Mililani Middle
3524	<b>Artsy Innovators</b> , Mililani Middle
4042	<b>Pauoa Robotics Ohana</b> , Pauoa Elementary
6898	<b>HMS Robotics</b> , Hongwanji Mission School
8660	<b>Pueo Technotics</b> , Mililani 'Ike Elementary
8662	<b>Kolea Bots</b> , Kapalama Elementary School
10794	<b>Eaglebots</b> , Kalihi Uka Elementary School
16854	<b>Waimea Middle Paniolo</b> , Waimea Middle PCS
16871	<b>The Honubots</b> , Kailua Elementary
17817	<b>Damien MechaMonarchs</b> , Damien Mem. School
25066	<b>Pumped Pugs</b> , Kalakaua Middle
28108	<b>Waihe'e Robo Warriors</b> , Waihe'e Elementary
30037	<b>TLS Green Machines</b> , Trinity Lutheran School
31920	<b>L.T.S.</b> , Salt Lake Elementary School
31921	<b>T.E.L.I.-Makers</b> , Salt Lake Elementary School
34906	<b>Ka'elepulu Robotics</b> , Ka'elepulu Elementary
44238	<b>Nā Honu Keolu</b> , Keolu Elementary
51563	<b>Fast Fooders</b> , Family/Community
52147	<b>Dinobots</b> , Kailua Intermediate
53300	<b>Ka Makani Pickle Dawgs</b> , Hawaii Prep Academy
56088	<b>Hilo Lavabots</b> , Family/Community
56114	<b>High Tech Chickens</b> , Ali'iolani Elementary
56140	<b>PVK Peacocks</b> , Princess Victoria Kaiulani Elementary
56225	<b>Iobotics</b> , 'Iolani School
56737	<b>Electric Sparks</b> , Enchanted Lake Elementary
56854	<b>Team Flapjacks</b> , Assets School
57089	<b>Roborams II</b> , Makalapa Elementary
57218	<b>Good Vibes</b> , Moanalua Middle School
58068	<b>Honaunau CyborgDawgs</b> , Honaunau Elementary
58373	<b>PalamaTrons</b> , HCAP- STEM
58375	<b>LeahiTrons</b> , HCAP- STEM
61762	<b>Ka Makani Frog 5</b> , Hawaii Prep Academy
62272	<b>Creative Creations Crew</b> , Pearl Ridge Elementary
63512	<b>Pixelated Penguins</b> , Kalakaua Middle

# FIRST® LEGO® League Challenge Overview

The four parts of the Challenge (Robot Design, Innovation Project, Robot Game, and Core Values) are equally weighted.

## CORE VALUES

Demonstrate *FIRST*® Core Values. Teams are evaluated during the robot game and the judging session.



- 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!

## ROBOT DESIGN

Teams prepare a short explanation on your robot design, programs, and strategy.



- **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.

## ROBOT GAME

Teams have three 2.5-minute matches to complete as many missions (and score as many points) as possible.



- 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!

## INNOVATION PROJECT

Teams prepare a live, engaging presentation to explain the work done on your innovation project.

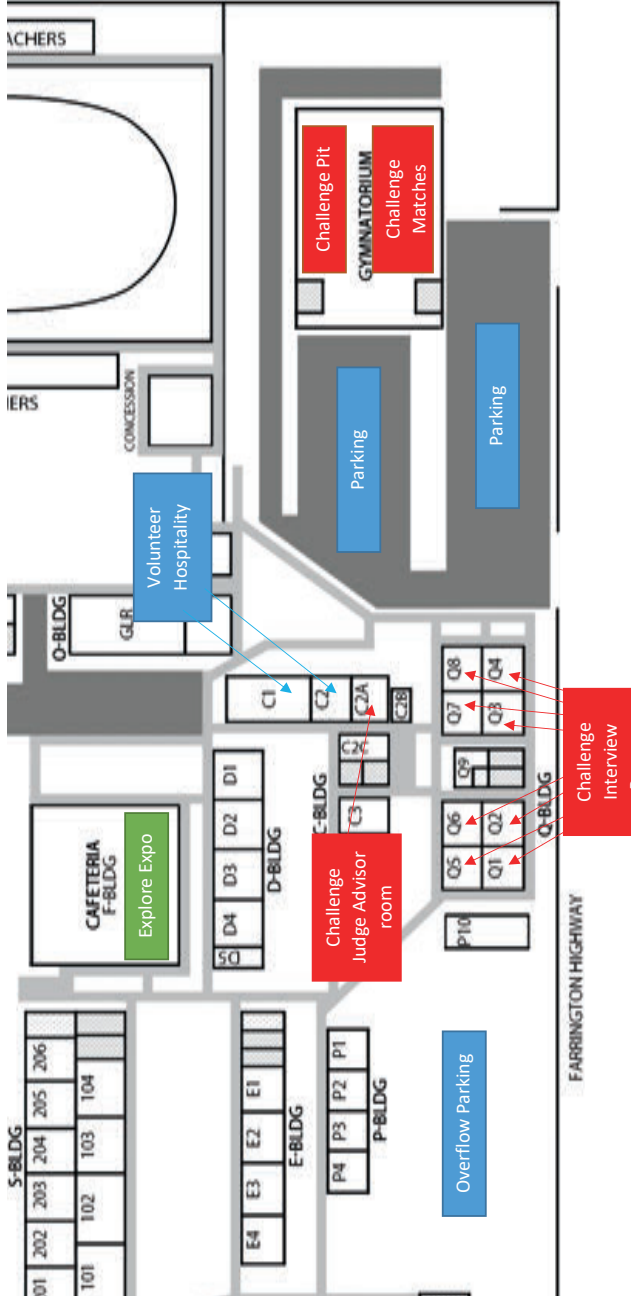


- **Identify** and research a problem to solve.
- **Design** a new solution or improve an existing one based on your selected idea, brainstorming, and plan.
- **Create** a model, drawing, or prototype.
- **Iterate** on your solution by sharing it with others and collecting feedback.
- **Communicate**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



← **During the robot games:  
Scan QR Code for scores. Be sure to  
refresh often to see the most  
up-to-date scores.**

# Event Rooms



### Explore (Grades 2-4) Schedule

7:30-8:00	Team Check-In & Set-Up (students, coaches, mentors only) (Cafeteria)
8:15	Coach Meeting (Cafeteria)
8:30	Reviewing Begins (Cafeteria)
9:00	Team Model & Poster Viewing Begins <b>Festival Open to Public</b> (Cafeteria)
10:00	Reviewing Ends
10:00	<b>Explore Hi-Fives Parade</b>
10:15-11:15	Extra Team Activities  Core Values Activity (Cafeteria side room)  Team Picture Taking (Gym)  Visit FLL Challenge Pits & Practice Tables (Gym)  Cheer on Robot Matches (Gym)
11:15-11:30	<b>FLL Explore Closing Ceremony</b> (Cafeteria)

### Challenge (Grades 4-8) Schedule

7:30-8:00	Team Registration (Gymnasium)
8:00	Coach Meeting (Bleachers)
9:00	Judging Rounds (Building Q, 9-12:30); see Challenge schedule for times. Teams only; not open to public.
9:00	Gymnasium Open to Public
9:00	Practice Tables Open in Pit Area (Challenge teams only)
9:30	Team Picture Taking (9:30 am-1 pm)
10:00	Explore Hi-Fives Parade
10:15	<b>FLL Challenge Opening Ceremony</b> Robot Games Begin. General Public Seating through Awards Ceremony.
11:30- 12:00	Challenge Robot Game Lunch Break
12:00	Matches resume. Team picture until 1 PM
1:30	Clean up Match Area
2:30	<b>Team Recognition &amp; Award Ceremony</b>

*Yellow-shaded events are open to the public*

# Mahalo to our Sponsors

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### About **FIRST**

**FIRST (For Inspiration and Recognition of Science and Technology)** was founded in 1989 to inspire young people's interest and participation in science and technology. Based in Manchester, NH, the 501(c)(3) not-for-profit public charity designs accessible, innovative programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

**Hawai'i FIRST Robotics (HFR)** is a 501 (c)(3) organization that coordinates robotics tournaments and expos for teams of students ages 6 through 18 in Hawai'i. HFR serves as the official partner in Hawai'i for *FIRST* LEGO League, *FIRST* Tech Challenge, and *FIRST* Robotics Competition, programs of *FIRST*. HFR shares and implements the rules and guidelines of *FIRST*. Through these programs, HFR works to "motivate young people to pursue education and career opportunities in science, technology, engineering, and math (STEM), while building self-confidence, knowledge, and life skills."