Agenda and Logistics

- Introductions and FIRST Overview
- FLL Challenge - Cargo Connect
  General Overview
- 2021-2022 Competition Structure
- Upcoming Webinars
- Q&A
FIRST® is the No. 1 youth-serving non-profit advancing STEM education outcomes and the development of 21st century skills.
Bridging the STEM skills gap
• The only sport where every kid can “go pro”
• Increasing STEM competence and confidence in young people while creating career opportunities and innovation in the fastest-growing fields

More Than Robots™
• Inspiring young people to develop a lifelong love of learning in an ever-changing workforce and society
• Equipping students with real-world skills, including digital literacy, teamwork, leadership, creative problem solving, and time/project management

Building the people who will change the world – today and tomorrow
• Helping students channel their raw curiosity, think critically, and seek ways to improve the world around them

...a transformative movement.
**FIRST IS**

**BUILDING GLOBAL CITIZENS**

**FIRST** Core Values emphasize friendly sportsmanship, respect for the contributions of others, teamwork, learning, and community involvement:

- **Discovery:** We explore new skills and ideas.
- **Innovation:** We use creativity and persistence to solve problems.
- **Impact:** We apply what we’ve learned to improve our world.
- **Inclusion:** We respect each other and embrace our differences.
- **Teamwork:** We are stronger when we work together.
- **Fun:** We enjoy and celebrate what we do!

**FIRST STUDENTS ARE**

**STEM CONFIDENT**

- 88% are more interested in learning about STEM
- 88% better understand how STEM is used to solve real-world problems
- 87% plan to take a more challenging math or science course

**WORKFORCE READY**

- 93% felt better equipped to resolve conflicts
- 98% were better prepared to solve problems
- 98% were more likely to embrace teamwork

https://www.firstinspires.org/resource-library/first-impact
FIRST Alumni Are Ready for a STEM Career

**First Alumni Are**
2.6x more likely to enroll in an **Engineering** course their freshman year (than a matched comparison group of students)

**Gains in Workforce Skills:**
- **Communication**: 76% of students reported gains
- **Conflict Resolution**: 93% of students reported gains
- **Time Management**: 95% of students reported gains
- **Problem-Solving**: 98% of students reported gains

**Over 75%** of FIRST Alumni are in a STEM field as a student or professional
FIRST Progression of Programs
**FIRST LEGO League Discover**

For children ages 4-6, this playful introductory STEM program ignites their natural curiosity and builds their habits of learning with hands-on activities in the classroom and at home using LEGO® DUPLO® bricks.

**FIRST LEGO League Explore**

In Explore, teams of students ages 6-10 focus on the fundamentals of engineering as they explore real-world problems, learn to design and code, and create unique solutions made with LEGO® bricks and powered by LEGO® Education WeDo 2.0.

**FIRST LEGO League Challenge**

Friendly competition is at the heart of Challenge, as teams of students ages 9-14 engage in research, problem-solving, coding, and engineering – building and programming a LEGO® Education SPIKE™ Prime or LEGO® MINDSTORMS® robot that navigates the missions of a robot game. As part of Challenge, teams also participate in a research project to identify and solve a relevant real-world problem.
Teams of 10 (avg.) or more students develop strategy, design and build sophisticated robots using a modular kit-of-parts, then compete head to head.
Teams of 25 (average) or more students compete with 120-pound robots in this Varsity Sport for the Mind,™ combining the excitement of sports with the rigors of science and technology.
Bobby Brinkley - State Judge
Joe Cunningham - State Judge
Theresa Jahng - State Judge
Rob Laura - State Judge
John Mrowka - State Judge
Beth Baran - Quality Control Officer
Glenn Speights - State Judge
Keaton Taliaferro - State Referee
Alex Packard - State Referee
Stephen Wilkerson - State Judge
Dana Aucoin
Bill Aucoin

Damian Doyle - Chair, UMBC
Jamie Gurganus - FLL Operational Partner, UMBC
Dave Baran - Head Judge, ARL
Richard Blorstad - Head Referee, Dematha HS
Robert Oehrli - Program Coordinator, Catonsville HS
Rose Young - Qualifier Coordinator
Kalika White - Volunteer Coordinator
Poulomi Banerjee - Communications Coordinator
Marco Ciavolino - Media Coordinator
Ken Schreinhofer - State Referee
Andrew Leeds - State Referee
Bel-air Boys and Girls club
20 Teams 2003
40 Teams 2004
UMBC
2005: 60 + Teams
2006: 75 +Teams
2007: 90+ Teams
2008: 103 Teams
2009: 165 Teams
2010: 200 Teams
2011: 264 Teams
2012-2013: 300 - 320
2014-2019 ~370-400
2020 (VIRTUAL) - 120
2021 (Hybrid): 220
What we Hope and ask this Season... together as a community we CAN!

● Opportunity
● Engagement
● Fun
● Respect
● Patience
● More FUN
● Team participation (in a SAFE, Equitable environment)
● FUN FUN FUN
● And above all.. GRACIOUS PROFESSIONALISM.
Good things to know..
Join Our Mission to Make a Better World
FLL Challenge - Cargo Connect
What is First Lego League - Challenge

Introduce 9-16 Year Olds to Real-World Engineering Challenges

• Design, build, and program robots using LEGO MINDSTORMS® or SPIKE™ Prime technology
• Apply real-world math and science concepts
• Research challenges facing today’s scientists
• Learn critical thinking, team-building, and presentation skills
• Participate in tournaments and celebrations
The Innovation Project

- Identify a real world problem linked to people not being active enough
- Research your problem and your solution ideas
- Design a new piece of technology or improve an existing one
- Make a model or prototype to show how this helps people be active
- Share your solution
- Collect feedback and iterate on your design
- Make sure your whole team is involved
Core Values

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Robot Design

- Design process, choices, and final design
- Programming
- Mechanical Design
- Competition Strategies
- Testing and evaluation plan
- Technical Knowledge, including mechanical design, programming, and efficiency
Robot Game

In the Robot Game, your team will:

**Identify** missions to solve

**Design**, build and program a LEGO robot to complete the missions

**Test** and refine your program and design

Your robot will have to navigate, capture, transport, activate or deliver objects. You and your robot will have 2 1/2 minutes to complete as many missions as possible, so be creative.
Robot Game - Separate Webinar Coming Soon on Missions

Robot Game Missions Video: https://www.youtube.com/watch?v=onsI9ke2Vho

Rulebooks, Updates, Build Instructions, etc: https://www.firstinspires.org/resource-library/fll/challenge/challenge-and-resources

*Note: Check updates weekly (updated on Wednesdays) for important information, clarifications, and minor changes to the rules
Youth Protection

**2 Lead Coaches** need to be screened

- 3 minute video
- Review FIRST Youth Protection Program Guide

http://www.firstinspires.org/node/3816

You will receive an email inviting you from FIRST to complete the Youth Protection Screening through Verified Volunteers.
Your Role as Coaches

- Be the cheerleader for the team
  - Don’t be afraid to ask parents for help
- Keep them on track
- **Coach does NOT need technical skills**
  - Kids will pick up the robot without much help
- Consistency matters – establish a routine early
- Teach through questions – brainstorm
  - “what would happen if ... ?”
  - “And then ... ?”
  - “How will that affect ... ?”
- Keep presentations to less than 20 minutes
- Be part of the team, if they are out playing go play with them
- Set expectations - Have a contract with parents/kids
Why you Should Volunteer as a Judge/Referee

● Volunteering will dramatically increase your understanding of the evaluation process
● It’s a lot of fun and you get to see and work with a lot of amazing young adults
● It will position you to better assist your team in preparing for a competition
2021-2022 Season Competition
Overview and Guiding Principles

● Returning to a qualifier model of competition this season
  ○ Most events will be hybrid
  ○ Limited fully remote opportunities
  ○ All teams at a qualifier will compete in the same manner

● Currently planning to hold a State Tournament
  ○ Each qualifier will have slots for the State Tournament
  ○ State Tournament will be hybrid, date TBD (Possible 3/5 or 3/26)

● Events on weekends between Jan 15- Feb 26

● Teams will be registering for preferred events, similar to previous seasons
  ○ Strongly encouraged to choose nearby events
  ○ Event Registration opening for one week in early November
  ○ Registration fee to compete in a Maryland qualifier will be $40 per team
Competition Structure

- **Hybrid**
  - Teams complete the Robot Rounds in person at the host site
  - Judging is remote on the same day
    - Consolidated judging format will be used this season
    - Judging will occur via an online, synchronous, ~25 min interview
    - Teams will submit some materials prior to the day of the event
  - Schedule allows for transportation time between site and home

- **Remote**
  - Remote synchronous judging
  - Robot Game recorded and submitted for scoring
  - Some pre-recorded submissions
Judging Updates

● New rubrics for this season

● Teams will be asked to submit content via video
  ○ Separate video submissions per topic area
    ■ Project
    ■ Robot Design
    ■ Core Values
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<td>Montgomery County</td>
<td>Hybrid</td>
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<tr>
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<tr>
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<td>PG County</td>
<td>Hybrid</td>
</tr>
<tr>
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<td>Eastern Shore</td>
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<tr>
<td>February 5th (Tentative)</td>
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***Dates are subject to change***
Volunteer Positions Needed

**In Person**
- Referees
- Queuers
- Crowd Control

**Remote**
- **Judges**
- Remote Queuers
- Remote Technical Support

Coaches are encouraged to judge (all virtual) another event, especially rookie coaches!

- **Contacts**
  - Kalika White - kwhitefirstmd@gmail.com
  - Deborah Harris - dharrisfirstmd@gmail.com

- **Links on FLL Website:**
  - Volunteer Newsletter
  - Volunteer Interest Form
Q&A

To ask a question you can either:

Enter a question in the chat or

Click the *raise hand* button by your name to let us know you would like to be unmuted to ask your question.