# Judging



# Eligibility

- To be eligible for awards and advancement, teams must participate in:
  - Robot Design Judging
  - Core Values Judging
  - Project Judging
  - Robot Performance



## Judging

- Teams spend at least 10 minutes with a pair of judges for each of the three categories.
- Up to two coaches are allowed in the rooms with their teams.
- Teams are evaluated against rubrics and are provided feedback through their rubrics.



## Judging

- Rubrics are not "scored," nor are they used to generate rankings.
- Rubrics are a tool to provide feedback and to gather thoughts in advance of deliberations.
- Judges discuss teams to determine advancement and awards.



#### Rubrics

- Each rubric has three sections. Each section has three skill areas on which teams are evaluated, nine total on each.
- Teams are evaluated on a scale from Beginning to Exemplary, with specific criteria listed.
- Each section allows judges to provide comments to teams. Generally, these take the form of something the judges liked and something for the team to improve on.
- Read the rubrics carefully to avoid being marked ND (Not Demonstrated) in any skill area.



# Robot Design Judging

- Format
  - Largely free-form, Q&A.
  - Teams may choose to complete the Robot Design Summary Worksheet to provide to judges (to keep).
- Teams must provide a printed, legible copy of their code to the judges (to keep).
- There will be a half-table with mat and models in the judging room.



# Robot Design Rubric - Mechanical Design

- Durability
  - Evidence of structural integrity; ability to withstand rigors of competition.
- Mechanical Efficiency
  - Economic use of parts and time; easy to repair and modify.
- Mechanization
  - Ability of robot mechanisms to move or act with appropriate speed, strength and accuracy for intended tasks.



#### Robot Design Rubric - Programming

- Programming Quality
  - Programs are appropriate for the intended purpose and would achieve consistent results.
- Programming Efficiency
  - Programs are modular, streamlined, and understandable.
- Automation/Navigation
  - Ability of the robot to move or act as intended using mechanical and/or sensor feedback.



# Robot Design Rubric - Strategy & Innovation

- Design Process
  - Ability to develop and explain improvement cycles where alternatives are considered and narrowed, selections tested, designs improved.
- Mission Strategy
  - Ability to clearly define and describe the team's game strategy.
- Innovation
  - Creation of new, unique, or unexpected feature(s) that are beneficial in performing the specified tasks.



# Project Judging

- Format
  - Presentation
  - Q&A
- Presentations are strictly limited to five-minutes.



### Project Rubric - Research

- Problem Identification
  - Clear definition of the problem being studied.
- Sources of Information
  - Quality and variety of data/evidence and sources cited.
- Problem Analysis
  - Depth to which the problem was studied and analyzed by the team, including extent of analysis of existing solutions.



#### Project Rubric - Innovative Solution

- Team Solution
  - Clear explanation of the proposed solution and description of how it solves the problem.
- Innovation
  - Degree to which the team's solution makes life better by improving existing options, developing a new application of existing ideas, or solving the problem in a completely new way.
- Solution Development
  - Systematic process used to select, develop, evaluate, test, and improve the solution.



### Project Rubric - Presentation

- Sharing
  - Degree to which the team shared their Project before the tournament with others who might benefit from the team's efforts.
- Creativity
  - Imagination used to develop and deliver the presentation.
- Presentation Effectiveness
  - Message delivery and organization of the presentation.



## Core Values Judging

- Format
  - Teamwork Activity
  - Core Values Poster
  - Q&A
- Teams will have three minutes to discuss their poster. The activity will take up to four minutes.
- Q&A can cover the poster, the activity, or something else about the team's Core Values.
- To account for time constraints, teams will leave their posters with judges (to be returned by the end of the tournament).



### Core Values Pilot

- Robot Design and Project Judging rubrics and guidelines can be found in any of the materials provided by FIRST®.
- Our region is participating the Core Values Pilot.
- Do not refer to FIRST® websites or materials from FIRST® regarding the Core Values rubric and poster. Our rubric and poster guidelines are different from most regions'.
- Find our rubric and poster guidelines at
  - https://github.com/drewwhis/alabama-first-lego-league/ tree/master/2018\_2019/judging



#### Core Values Rubric - Inspiration

- Discovery
  - Team explored and improved skills or ideas within all three aspects of FIRST LEGO League; used creativity & persistence to solve problems.
- Team Identity
  - Fun expression of team identity; team expresses how they enjoy FIRST LEGO League.
- Impact
  - Team applied knowledge, skills and/or values learned in FIRST LEGO League to improve themselves and their world.



#### Core Values Rubric - Teamwork

- Effectiveness
  - Problem solving and decision-making processes help team achieve their goals.
- Efficiency
  - Resources used relative to what the team accomplishes; team is stronger together than its individual members.
- Kids Do the Work
  - Appropriate balance between team responsibility and coach guidance.



# Core Values Rubric - Gracious Professionalism®

- Respect & Inclusion
  - Consideration and appreciation for the contributions of all team members, especially when solving problems or resolving conflicts.
- Fairness & Integrity
  - Team members act and speak with fairness and integrity. Team competes in the spirit of friendly competition and helps others feel valued.
- Coopertition®
  - Learning is more important than winning; Team learns from, teaches, and cooperates with each other and competing teams.



### Core Values Poster

**Discovery** Respect & Inclusion **Team Name** No taller than 36 inches (91cm) Other Core Values judging categories **Impact** Fairness & Integrity (For example: Team Identity, Teamwork, Coopertition®)



