FIRST LEGO LEAGUE Robot Design

Team Number 1

Judging Room

Directions: For each skill area, clearly mark the box that best describes the team's accomplishments. If the team does not demonstrate skill in a particular area, then put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

Mechanical Design

	Beginning	Developing	Accomplished	Exemplary
Durability — Evidence of structural integrity; ability to withstand rigors of competition				
ND	quite fragile; breaks a lot	frequent or significant faults/repairs	rare faults/repairs	sound construction; no repairs
Mechanical Efficiency — Economic use of parts and time; easy to repair and modify				
ND	excessive parts or time to repair/modify	inefficient parts or time to repair/modify	appropriate use of parts and time to repair/modify	streamlined use of parts and time to repair/modify
Mechanization — Ability of robot mechanisms to move or act with appropriate speed, strength and accuracy for intended tasks (propulsion and execution)				
ND	imbalance of speed, strength and accuracy on most tasks	imbalance of speed, strength and accuracy on some tasks	appropriate balance of speed, strength and accuracy on most tasks	appropriate balance of speed, strength and accuracy on every task

Comments: well designed / sturdy excellent use of attachments

Programming

	Beginning	Developing	Accomplished	Exemplary
Programming Quality — Programs are appropriate for the intended purpose and would achieve consistent results, assuming no mechanical faults				
ND	would not achieve purpose AND would be inconsistent	would not achieve purpose OR would be inconsistent	should achieve purpose repeatedly	should achieve purpose every time
Programming Efficiency — Programs are modular, streamlined, and understandable				
ND	excessive code and difficult to understand	inefficient code and challenge to understand	appropriate code and easy to understand	streamlined code and easy for anyone to understand
Automation/Navigation — Ability of the robot to move or act as intended using mechanical and/or sensor feedback (with minimal reliance on driver intervention and/or program timing)				
ND	frequent driver intervention to aim AND retrieve robot	frequent driver intervention to aim OR retrieve robot	robot moves/acts as intended repeatedly w/ occasional driver intervention	robot moves/acts as intended every time with no driver intervention

Comments: clear understanding of programming. Good use of comments to explain purpose of each event.

Strategy & Innovation

	Beginning	Developing	Accomplished	Exemplary
Design Process — Ability to develop and explain improvement cycles where alternatives are considered and narrowed, selections tested, designs improved (applies to programming as well as mechanical design)				
ND	organization AND explanation need improvement	organization OR explanation need improvement	systematic and well-explained	systematic, well-explained and well-documented
Mission Strategy — Ability to clearly define and describe the team's game strategy				
ND	no clear goals AND no clear strategy	no clear goals OR no clear strategy	clear strategy to accomplish the team's well defined goals	clear strategy to accomplish most/all game missions
Innovation — Creation of new, unique, or unexpected feature(s) (e.g. designs, programs, strategies or applications) that are beneficial in performing the specified tasks				
ND	original feature(s) with no added value or potential	original feature(s) with some added value or potential	original feature(s) with the potential to add significant value	original feature(s) that add significant value

Comments: Professionally prepared manual which showed thoughtful approach to strategy timeline

Strengths: Mechanical Design Programming Strategy & Innovation

Bot Builders

Core Values

PILOT for INTO ORBIT℠

Team Number 1

Judging Room CV2

Directions: For each skill area, clearly mark the box that best describes the team's accomplishments. If the team does not demonstrate skill in a particular area, then put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

		Beginning	Developing	Accomplished	Exemplary
Inspiration	**Discovery**	Team explored and improved skills or ideas within all three aspects (Robot, Project, Core Values) of *FIRST* LEGO League; used creativity & persistence to solve problems			
	ND	minimal examples / all examples from 1 aspect	some examples / examples from 2 aspects	multiple examples / examples from all 3 aspects	multiple examples of exploring new skills & ideas; extensive examples of improving in all 3 aspects
	Team Identity	Fun expression of team identity; team expresses how they enjoy *FIRST* LEGO League			
	ND	minimal identity; minimal enjoyment	some identity; enjoyment is unclear	clear identity; team clearly expresses their enjoyment	clear identity; team engages others in their enjoyment
	Impact	Team applied knowledge, skills and/or values learned in *FIRST* LEGO League to improve themselves and their world			
	ND	unclear impact of *FIRST* LEGO League	knowledge, values or skills impacted some team members	knowledge, values or skills impacted all team members	knowledge, values or skills impacted all team members **AND** team used values or skills to help others

Comments: Highly enthusiastic and engaged team. Shared their lollies with all teams. Shared videos on YouTube - great inspiration!

Teamwork	**Effectiveness**	Problem solving and decision-making processes help team achieve their goals			
	ND	team goals AND team processes unclear	team goals OR team processes unclear	clear team goals and processes	clear processes enable team to accomplish well defined goals
	Efficiency	Resources used relative to what the team accomplishes (time management, distribution of roles and responsibilities); team is stronger together than its individual members			
	ND	limited time management / role definition	clear time management / role definition	good time management / role definition allows team to avoid wasting effort **OR** resources	excellent time management / role definition allows team to avoid wasting effort **AND** resources
	Kids Do the Work	Appropriate balance between team responsibility and coach guidance			
	ND	limited team responsibility AND excessive coach guidance	limited team responsibility OR excessive coach guidance	Good balance between team responsibility and coach guidance	team independence with appropriate coach guidance

Comments: Worked well with a large team, confirmation of all decisions with all team members. Excellent journal, great documentation of the design journey.

Gracious Professionalism®	**Respect & Inclusion**	Consideration and appreciation for the contributions of all team members, especially when solving problems or resolving conflicts			
	ND	limited consideration / appreciation for contributions	consideration / appreciation for contributions of most team members	clear consideration / appreciation for contributions of all team members	all team members' contributions actively welcomed, recognized & included
	Fairness & Integrity	Team members act and speak with fairness and integrity. Team competes in the spirit of friendly competition and helps others feel valued.			
	ND	not evident with majority of team members	evident with majority of team members	clearly evident with all team members	clearly evident with all team members **AND** team encourages fairness & integrity in others
	Coopertition®	Learning is more important than winning; Team learns from, teaches, and cooperates with each other and competing teams.			
	ND	unclear or lack of team members cooperating with each other	team members cooperate with each other	team actively learns from and teaches teammates / celebrates other teams' successes	team actively helps, learns from, or collaborates with other teams **AND** celebrates other teams' successes

Comments: Cheering on other teams as they left for competition. Very dedicated to Robotics and FLL.

Strengths: Inspiration Teamwork Gracious Professionalism®

Really impressive - well done Bot Builders!

Project

Team Number 1

Judging Room LAP01

Directions: For each skill area, clearly **mark the box that best describes the team's accomplishments.** Teams should demonstrate everything at the level; if they are missing part, mark the level below. If the team does not demonstrate an area, put an 'X' in the first box for Not Demonstrated (ND). Please provide as many written comments as you can to acknowledge each team's hard work and to help teams improve. *When you have completed the evaluation, please circle the team's areas of strength.*

		Beginning	Developing	Accomplished	Exemplary
Research	**Problem Identification** * Clear definition of the problem being studied				
	ND	unclear; few details	partially clear; details missing	mostly clear; detailed	clear; very detailed
	Sources of Information Quality and variety of data/evidence and sources cited				
	ND	minimal quality; variety limited	quality OR variety need improvement; did not include professional(s)	sufficient quality and variety; included professional(s)	extensive quality and variety; included multiple professionals
	Problem Analysis Depth to which the problem was studied and analyzed by the team, including extent of analysis of existing solutions				
	ND	minimal study; no analysis	minimal study; some analysis	sufficient study and analysis	extensive study and analysis
Comments	lovely awareness of some of the current ideas and research in your area				
Innovative Solution	**Team Solution*** Clear explanation of the proposed solution and description of how it solves the problem				
	ND	difficult to understand	some parts confusing	understandable	easy to understand by all
	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.				
	ND	existing solution/application	solution/application contains some original element(s)	original solution/application; potential added value	original solution/application; demonstrated added value
	Solution Development Systematic process used to select, develop, evaluate, test, and improve the solution (Implementation could include cost, ease of manufacturing, etc.)				
	ND	process AND explanation need improvement	process OR explanation need improvement	systematic process included evaluation	systematic process included evaluation; implementation considered
Comments	we would have liked to see and hear more about the reasons why three current solutions affected				
Presentation	**Sharing*** Degree to which the team shared their Project before the tournament with others who might benefit from the team's efforts				
	ND	shared with family / friends	shared outside family / friends (such as classmates)	shared with one audience who may benefit OR one professional	shared with multiple audiences who may benefit OR multiple professionals
	Creativity Imagination used to develop and deliver the presentation				
	ND	minimally engaging OR unimaginative	engaging OR imaginative	engaging AND imaginative	very engaging AND exceptionally imaginative
	Presentation Effectiveness Message delivery and organization of the presentation				
	ND	unclear OR disorganized	partially clear; minimal organization	mostly clear; mostly organized	clear AND well organized
Comments	Great cohesion as a team and collaboration				

would offer innovation

Strengths: Research Innovative Solution Presentation

*Required for Award Consideration