

## FLL Sample Master Schedule

The schedule below was authored by one of our mentors. We offer it as an example progress sheet for your teams.

Week	Dates	General	Robot	Project
Week 0:			Build field kit	Discuss research topic. Develop 1-2 page summary of research to share with team
Week 1:		Challenge Overview Check Robot Game updates on FLL website (firstlegoleague.org)	Set up practice field. Walk through missions and rules. Brainstorm possible mission combinations and strategies.	Discuss Project Challenge  Share research on different types of project topics.  Select 2 topics to focus on. Homework to research on these 2 types with focus on the challenge requirements.
Week 2:		Brainstorm team names Check Robot Game updates on FLL website (firstlegoleague.org)	Set up practice field. Review missions and rules. Brainstorm possible mission combinations and strategies. Rank order difficulties and evaluate risks.	Share research to from last week; <b>select a topic</b> to focus on and for homework research the problem and existing solutions.  Discuss types of experts to meet, field trips to attend, etc. Set up field trips and meetings
Week 3:		Discuss ideas for Team Names.  Talk about team goals, what it would take to achieve the goals, review season's calendar (this one) and adjust as needed meet the goals  Check Robot Game updates on FLL website (firstlegoleague.org)	Brainstorm possible mission strategies and associated robot designs. Identify and agree upon the missions the team wants to pursue. Experiment with different chassis designs	Share research to date, select <b>the team problem to focus on</b> and for homework researching the problem and existing solutions.

Week	Dates	General	Robot	Project
Week 4:		Brainstorm research ideas  Select Team Name  Do a Core Value Exercise	Experiment with different chassis designs, attachments. Write blocks to test.	Share team member research on the selected problem, existing solutions to that problem and results from contacting experts. Refine the team's identified problem and brainstorm innovative solutions. Continue researching existing solutions and talking to experts
Week 5:		Check Robot Game updates on FLL website (firstlegoleague.org)  Identify roles and responsibilities (see suggested list below)  Discuss presentation strategies – skits, song, video, etc.	Design the robot to perform 25% of the missions that the team considers easiest. Consider robot designs and strategies for expansion to other missions. Save copies and backup programs	Share team member research on the selected problem, existing solutions to that problem and results from contacting experts. Refine the team's identified problem and brainstorm innovative solutions. Continue researching existing solutions and talking to experts  Select a unique solution and brainstorm how members will share their findings with others in the community.
Week 6:		Check Robot Game updates on FLL website (firstlegoleague.org)  Decide on presentation strategies – skits, song, video, etc.  Do a Core Value Exercise	Design and program the robot to achieve the 25% of the missions identified in Week 3.	“Design” unique solution.  Gather research and materials to support solution.
Week7:		Reassess team goals. Do we need to adjust goals or schedule based on progress to date?	Design and program the robot to achieve 50% of the team's robot-related goals	Gather research and materials. Continue design of solution.
Week8:		Do a Core Value Exercise	Design and program the robot to achieve 50% of the team's robot-related goals	Continue design of solution. Prepare research materials

Week	Dates	General	Robot	Project
Week 9:		Check Robot Game updates on FLL website (firstlegoleague.org)	Try to meet 75% of the team's robot-related goals	Complete 75% design of solution. Finish preparing materials and plans for sharing the team's findings with the community. Have team do the necessary research to fill in gaps and work on the visual aids needed for their findings
Week 10:		Check Robot Game updates on FLL website (firstlegoleague.org)  Identify robot drivers (more than 2 is ok, then need to strategize rotation)  Do a Core Value Exercise	Try to meet 75% of the team's robot-related goals with increasing reliability	Implement sharing strategy and plans. Brainstorm how to creatively present the team's presentation materials for the Project presentation
Week 11:		Check Robot Game updates on FLL website (firstlegoleague.org)  Finalize the presenter's roles for presentations	Try to meet 100% of the team's robot-related goals most of the time. Test the robots with different lighting conditions, understand the effects of a battery change and practice changing robot operators	Complete 100% design of solution.  Create Project Presentation Materials
Week 12:		Thanksgiving Weekend  Plan Core Value Poster and Core Value Presentation	Try to meet 100% of the team's robot-related goals most of the time. Test the robots with different lighting conditions, understand the effects of a battery change and practice changing robot operators. Fine-tune the robot design and programming. Make sure that all robot-related goals can be met consistently	Create Project Presentation Materials
Week 13:		Do a Core Value Exercise Plan Core Value Poster and Core Value Presentation	Fine-tune the robot design and programming. Make sure that all robot-related goals can be met consistently.	Put finishing touches on the presentation and visual aids. Have members assess whether they include all 3 steps of the project adequately in their presentation

Week	Dates	General	Robot	Project
Week 14:		<p>Check Robot Game updates on FLL website (firstlegoleague.org)</p> <p>Gather materials for Core Value Poster</p> <p>Draft Team information Sheet and RDES (Robot Design Executive Summary). See last page for details.</p>	<p>Fine-tune the robot design and programming. Make sure that all robot-related goals can be met consistently. Practice Field Table Runs. Practice Technical Presentation/Discussion</p>	<p>Put finishing touches on the presentation and visual aids. Have members assess whether they include all 3 steps of the project adequately in their presentation</p>
Week 15:		<p>Check Robot Game updates on FLL website (firstlegoleague.org)</p> <p>Complete Core Value Poster</p> <p>Do a Core Value Exercise</p> <p>Practice discussions for Core Value Judging</p>	<p>Fine-tune the robot design and programming. Make sure that all robot-related goals can be met consistently. Practice Field Table Runs. Practice Technical Presentation/Discussion</p>	<p>Practice Presentation</p>
Week 16:		<p>Do a Core Value Exercise</p> <p>Practice discussions for Core Value Judging</p> <p>Complete Team information Sheet and RDES (Robot Design Executive Summary). See last page for details.</p>	<p>Practice Field Table Runs. Practice Technical Presentation/Discussion</p>	<p>Fine-tune project presentation to make sure the team can stay within 5-minute limit. Present smoothly and respond confidently to questions</p>
		<p>Winter Holidays – meetings scheduled as necessary to prepare for qualifiers. Timed Dry Runs on all judging areas.</p>		
		<p>January: Prepare for Qualifier. Timed Dry Runs on all judging areas.</p>		
TBD		<p><b>Qualifier</b></p>		

Week	Dates	General	Robot	Project
TBD		State Competition		
TBD		World or US OPEN		
TBD	2030	Globals on Mars (we can hope)		

## Robot Design Executive Summary (RDES)

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To help the Robot Design judges quickly and consistently learn about your robot and the design process used, we are requiring a short presentation. An “executive summary” is often used by engineers to briefly outline the key elements of a product or project. In other words, the purpose of the RDES is to give the Robot Design judges an outline of your robot and all that it can do. The RDES is intended to help your team consider in advance the most important information to share with the judges. What you chose to share will enable the judges to effectively evaluate your team and provide more helpful feedback.

Your team is free to determine how much time you invest, but realistically it should only take a few hours to develop and practice the RDES. The RDES is NOT intended to be as extensive or time consuming as your Project.

Your team will present your RDES at the beginning of your Robot Design judging session. The entire presentation, including the trial run, should not take any longer than four (4) minutes. Following your Robot Design presentation the judges will pose questions for your team to answer. You are not required to provide a written version of the RDES to leave with the judges.

**Basic Outline:** The RDES should include the following elements: Robot Facts, Design Details, and a short Trial Run.

**Robot Facts:** Share with the judges a little bit about your robot, such as the number and type of sensors, drivetrain details, number of parts, and the number of attachments. The judges would also like to know what programming language you used, the number of programs and the amount of memory used by each program, and your most consistently completed mission.

### Design Details:

1. **Fun:** Describe the most fun or interesting part of robot design as well as the most challenging parts. If your robot has a name, who chose the name and why. If your team has a fun story about your robot please feel free to share.
2. **Strategy:** Explain your team’s strategy and reasoning for choosing and accomplishing missions. Talk a little bit about how successful your robot was in completing the missions that you chose. Judges may like to hear about your favorite mission and why it is your favorite.
3. **Design Process:** Describe how your team designed your robot and what process you used to make improvements to your design over time. Briefly share how different team members contributed to the design and how you incorporated all the ideas.
4. **Mechanical Design:** Explain to the judges your robot’s basic structure, how you make sure your robot is durable and how you made it easy to repair or add/remove attachments. Explain to the judges how the robot moves (drivetrain), and what attachments and mechanisms it uses to operate or complete missions.
5. **Programming:** Describe how you programmed your robot to ensure consistent results. Explain how you organized and documented your programs, as well as, mention if your programs use sensors to know (and ensure) the location of the robot on the field.
6. **Innovation:** Describe any features of your robot design that you feel are special, different or especially clever.

**Trial Run:** Demonstrate the operation of your robot for the judges performing the mission(s) of your choice. Please do not do an entire robot round; time will be needed for judges to ask questions of your team.