

Why Judge Session is so important

FLL weightings: Robot Game- 25%, Judge Session-75%

How to present to your judges

- Be calm and confident, speak loud and clearly
- Be proud of what you have done
- Be happy to share
- Be informative (answer questions with examples)
- Be respectful (smile, eye contact, good posture, no argue, always thank the judge ...)

How to prepare:

- Create speaker notes for each question
- Each team member have at least one focused area to answer
 - Areas: (robot) coding/building/strategy testing ... (project) research/prototype/outreach ... (core value) six core values
- Always have at least 2 team members to prepare for one type of questions
- Make sure your answer covers all the major checkpoints of related rubrics
- Keep practicing every day

Nice to Have:

- Consider having a team Engineering Journal to document your process
- Consider sharing any testing your team may have done
- Some teams create a poster board with examples to point to
- Consider printing out your code as well as pictures of your development process and current robot
- Consider leaving a one-page summary of your presentation with your judges to help them remember your team (include a picture of your team, your robot and the key information you want to communicate)

Judge Session Flow Chart:

<https://firstinspires.blob.core.windows.net/fll/challenge/2024-25/fll-challenge-submerged-judging-session-flowchart.pdf>

Judge Rubrics:

<https://firstinspires.blob.core.windows.net/fll/challenge/2024-25/fll-challenge-submerged-rubrics-color.pdf>

Judge Session Script:

https://www.firstinspires.org/sites/default/files/uploads/resource_library/fll/superpowered/superpowered-judging-session-script.pdf

Question List: – Innovation Project

1. How did you come up with the idea?
2. What are your research sources? Or How did you do your research?
3. How did you improve your design?
4. How expensive will your invention be?
5. What is the part you are most proud of for your innovation project?
6. Did you meet any difficulties in your project development? How did you handle it?
7. What do you see as the advantage of your invention compared with that?
8. What factors have you considered for the implementation of your invention in a real system?
9. Can you describe the mechanism behind your project
10. How do you expect your project to help the desired applications?
11. What would be your plan of further improvement if you have one more month?

Question List: –Core values

1. What outreach activities did your team do this season?
2. How did your coach help you through the season?
3. Examples of each core value
4. What new concepts or skills have you learned this season? This could be in robot or innovation project
5. Have you worked with any other teams this season?
6. From your own experience, do you feel this season is anything different compared with previous seasons? Make sure you give some examples
7. This might be the last season for some of you. What is your plan for the next year? Are you going to continue doing FIRST? Any other plans you have in mind? (Please note, ask yourself which core value(s) this question is trying to get)
8. If you were to give some advice to young kids who are considering joining FLL, or junior teams, what would it be? (Please try to come up with something related to your own core value)
9. What part of the season you enjoyed the most
10. Did you get to use what you learned in FLL in your daily life? How?

Question List: –Robot Design Questions

1. Did every team member contribute to the design & coding? Give examples?

2. How do you work together to solve challenging problems? Make sure to give at least one example
3. How did your team ensure consistent results for the robot games? Please give an example. (or Which mission did your team complete most consistently? Explain why?)
4. Please give an example of how did you apply engineering design process to solve one particular robot mission problem, e.g how did you identify the problem to solve , how did you brainstorm the mechanism and navigation methods for the solution, how did you develop the prototype (attachment, code), how do you test it, how did you change it and make it better (stronger, more efficient, more reliable), how do you share it with your teammates and include the final one to the mission solution.
5. How does your team get its ideas for your design and navigation? Did you reference others?
6. How have your robot programs changed over the duration of the season? Explain why and how you make the changes (give an example for one particular mission).
7. Find one innovative feature of your robot game design, including robot design, attachment design, game strategy, explain how you came up with the idea
8. Why did your team decide to switch programming language from ev3 mindstorm to micropython? Can you tell me how you prepare for the new season with a new language?
9. What challenges have you had in your robot game development and how did you handle that?
10. How did the team organize and document the changes to your design and code changes?
11. if you have one more month, what would you do on robot game
12. Explain how your team decided to choose to finish the missions in this order?

More details: DESCRIBE YOUR ROBOT

- How did you come up with the design for the base robot? Did you start with an existing design (your last year's robot or something from the Internet/book)?
 - Experienced judges can recognize standard designs. Therefore, always cite your sources.
- Did you test your design(s) before picking it?
- How do you test your robot?
- What are the features on it? Why?

- What features on the robot make it sturdy and balanced?
- What features are you proud of?
- Did the design change over time?

More details: DESCRIBE THE SENSORS & MOTORS

- How many motors and sensors do you use? Which ones?
- Why did you choose to use those? Which missions do you use them on?
- How do you use sensors and do you use them in any novel way?

More details: EXPLAIN YOUR TEAM'S STRATEGY

- How did you come up with your strategy?
- How did you decide on which missions to accomplish?

More details: EXPLAIN your ATTACHMENT DEVELOPMENT

- How do you solve the missions?
- How did you come up with that solution?
- How did that solution change over time?
- Do you solve a particular mission in an unusual way?

More details: Explain your PROGRAMMING

- Since the table is not in the room, you cannot rely on “showing your programs in action” to explain automation and consistency
- Therefore, learn to explain your code clearly
- No matter what programming language you used, you should be able to communicate your programming techniques to the judges
 - Make sure you have pseudocode and comments
- You should be able to explain your code on a laptop or using a printout

More details: EXPLAIN YOUR PROGRAMMING

- Explain how your code is organized
 - How do you know what a block is doing? Are there comments?
 - Do you use My Blocks (or equivalent Functions in another language)?
 - How do you keep track of changes to the code?
- Explain any interesting algorithms your team came up with

- Explain how your code helps your robot be more reliable. What coding techniques/sensors do you use?
- Again, experienced judges will recognize code from others
 - If you used code from some source, always remember to cite it, explain how it works, and how your team modified or used it