

FIRST[®] Robotics Competition Award Workbook

At the event, all teams will have volunteer judges come by the pit to talk to students about their robot and outreach efforts. This document covers all of the awards including the description and guidelines as well as suggested questions. These questions are provided to judges as a starting point, but judges are encouraged to ask other clarifying questions as needed. Teams should also consider checking out the [Best Practices for FIRST Robotics Competition Judged Awards](#) sheet for more tips on interacting with judges.

Awards Based on Machine, Creativity, and Innovation

Award	Description	Guidelines
Autonomous Award	Celebrates the team that has demonstrated consistent, reliable, high-performance robot operation during autonomously managed actions. Evaluation is based on the robot's ability to sense its surroundings, position itself or onboard mechanisms appropriately, and execute tasks.	<ul style="list-style-type: none"> The award is based on the performance of the robot's autonomous (non-operator guided) operations during matches Consistent and reliable operation is weighted more heavily than the ability to score maximum points during any specific autonomously managed actions A team must be able to explain: <ul style="list-style-type: none"> How the robot understands its surroundings, navigates on the field or positions onboard mechanisms and then executes tasks. The factors the teams considered that could interfere with success during autonomously managed actions. The design, development, and testing that was done for the robot's autonomously managed actions.
Creativity Award <i>sponsored by Rockwell Automation</i>	Celebrates creativity that enhances strategy of play and was intentionally designed and not discovered.	<ul style="list-style-type: none"> A team must be able to competently describe the creative/unique feature(s) and can trace its conception and design. Since creativity may involve risk of failure, the team should be able to describe how they mitigated that risk. The creative element's uniqueness has a practical application and contributes to the objectives of the competition. Developing the creative element contributed to the team's success on the field.
Excellence in Engineering Award	Celebrates the team that demonstrates a professional approach to the design process.	<ul style="list-style-type: none"> A team must be able to describe the engineering process they went through and can trace elements of the designs from conception The designs reflect an engineering solution to a specific problem, and it is functional and practical. The designs are elegant and advantageous on the field of play
Industrial Design Award <i>sponsored by General Motors</i>	Celebrates the team that demonstrates industrial design principles, striking a balance between form, function, and aesthetics.	<ul style="list-style-type: none"> A team must be able to describe how their robot is elegant, efficient (simple/executable), and practical. The entire machine design, or the detailed process used to develop the design, is worthy of this recognition, and not just a single component. The robot distinguishes itself from others by its aesthetic and functional design
Innovation in Control	Celebrates an innovative control system or application of control components – electrical, mechanical or software – to provide unique machine functions.	<ul style="list-style-type: none"> A team must be able to identify and describe the controls innovation and can trace its conception, design, manufacturing/assembly, or deployment. The control system is innovative and unique. It is integrated with the machine, human players, strategy, etc. in concept and execution. The innovation is practical; it addresses the game's challenge and is reliable under the stress of competition.

Quality Award	Celebrates machine robustness in concept and fabrication	<ul style="list-style-type: none"> • A team must be able to describe their quality plan i.e. how their design ensures robustness throughout the entire competition. • The entire machine demonstrates quality: workmanship, welds, attachment systems, wiring, paint, etc. • The machine can withstand the rigors of competition – maintaining functionality, including the use of designed-in redundancy and risk mitigation measures • Building the machine contributes to the team's success
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Examples of Interview Questions

Below are example questions for conducting interviews. These questions are not required, they're meant to supplement each judge's own personal interview style. However, judges should remember the following points as they move through pit interviews:

1. Take a lot of detailed notes (including Team #). The details are used to write award scripts.
2. Interview time is limited, make the most of the time you have.
3. Have fun, praise the kids for their hard work & thank the mentors for their time and support!

Machine, Creativity, & Innovation Awards Questions

- What 1 component or control aspect of your robot has worked well (as originally designed) all season?
- If you could *snap* your fingers and change one component or control aspect on your robot, what would you change and why?
- What is your favorite ("Coolest") feature on the robot?
- What feature are you most proud of this year?
- What is the most creative part on your robot?
- What features make your robot different/unique?
- Have you seen any other teams with a similar feature?
- Describe the aspects of your robot that are done autonomously.
- How effective has it been in match play?
- Tell me about the design process your team used to meet this year's game challenges.
- How did you decide what was critical for being effective in this year's competition?
- What features on your robot were specifically designed to give you a strategic advantage?
- What has been your biggest maintenance headache this season?
- What adjustments/upgrades have you made on your robot since you started match play?
- **FINAL QUESTION ... Is there anything you would like to tell us about your robot that we didn't cover?**

Awards Based on Team Attributes

Award	Description	Guidelines
Engineering Inspiration Award	Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school or organization and community.	<ul style="list-style-type: none"> • Extent and inventiveness of the team's efforts to recruit students to engineering with particular emphasis on the most recent year's efforts. Measurable success of those efforts. • Extent and effectiveness of the team's community outreach efforts with particular emphasis on the most recent year's efforts. Measurable success of those efforts. • A commitment to science and technology education among the team, school, and community. • Achievement of the <i>FIRST</i> mission and ability to communicate that at the competition and away from it. • Efforts are ongoing, not strictly concentrated on the build and competition season.
Gracious Professionalism Award	Celebrates outstanding demonstration of <i>FIRST</i> Core Values such as continuous <i>Gracious Professionalism</i> , sportsmanship, and working together both on and off the playing field.	<ul style="list-style-type: none"> • The team exemplifies the principles of <i>FIRST</i> Core Values in relationships with other teams and by their demonstrated <i>Gracious Professionalism</i> • The team consistently demonstrates <i>Gracious Professionalism</i> and a positive attitude both on and off the field. • If the team worked with another <i>FIRST</i> Robotics Competition team pre-season – they can describe the following: <ul style="list-style-type: none"> ○ How the collaboration was conducted during the off-season and during the build season ○ How the teams divided up tasks fairly and equitably? ○ How the process of communication flowed from one team to the other ○ How working together as a group was beneficial over working independently ○ The financial impacts of working together vs working independently
Imagery Award <i>in honor of Jack Kamen</i>	This award celebrates attractiveness in engineering and outstanding visual aesthetic integration of machine and team appearance.	<ul style="list-style-type: none"> • Appearance of machine and team are integrated in an attractive theme. • Visuals of the integrated team/machine are exceptional. • The team theme is supportive of the principles of <i>FIRST</i> Core Values. • The team's theme is original, can be explained by a team spokesperson, and is fitting to the objectives, character, and/or history of the team.
Judges Award	During the course of the competition, the judging panel may decide a team's unique efforts, performance, or dynamics merit recognition.	<ul style="list-style-type: none"> • The team keeps appearing for consideration for other awards. • Other judges have noticed and commented on the positive aspects of the team. • A unique happening or feature (often one that demonstrates the team has fully embraced the principles of <i>FIRST</i>) has caught a judge's attention.

<p>Rookie All-Star Award Note: Any team with a team number of 9400 or higher is eligible for Rookie awards</p>	<p>Celebrates the rookie team exemplifying a young but strong partnership effort, as well as implementing the mission of <i>FIRST</i> to inspire students to learn more about science and technology.</p>	<ul style="list-style-type: none"> • This team seems like a “<i>FIRST</i> Impact Award team in the making.” (Community activities, leadership, vision, spirit, etc.) • The team is a true partnership between school or organization and sponsors. • The team understands what <i>FIRST</i> is really trying to accomplish – realizes that technical stuff is fun, challenging, and offers a future. • This team has built a robot appropriate to the game’s challenges.
<p>Rookie Inspiration Award Note: Any team with a team number of 9400 or higher is eligible for Rookie awards</p>	<p>Celebrates a rookie team’s outstanding success in advancing respect and appreciation for engineering and engineers, both within their school, as well as in their community.</p>	<ul style="list-style-type: none"> • Effectiveness and inventiveness of the team’s efforts to recruit students to engineering. • Extent and effectiveness of the team’s community outreach efforts. • A commitment to science and technology education among the team. • Ability to communicate understanding of the <i>FIRST</i> mission at the competition and away from it.
<p>Team Spirit Award</p>	<p>Celebrates extraordinary enthusiasm and spirit through exceptional partnership and teamwork furthering the objectives of <i>FIRST</i>.</p>	<ul style="list-style-type: none"> • Spirit is consistent both throughout the team and also throughout the contest in attitude, appearance, originality, and depth. • The team displays obvious enthusiasm – in supporting teams, appearance, interactions with teams/judges, etc. – at the competition. • Spirit is part of the team and is apparent in all they do, including at their school, in their community, with sponsors and other teams, etc. • They demonstrate spirit as a unified team.
<p>Team Sustainability Award sponsored by Dow New award criteria</p>	<p>Celebrates and recognizes a team which has developed sustainable practices to have a positive environmental impact and achieve long-term continuity.</p>	<ul style="list-style-type: none"> • The team has a clear concept or approach to building their team and operates as a cohesive unit. • The team proactively identified and managed risks, acquiring the assets to effectively deal with adversity as well as unexpected events. • The team understands that operating in harmony with the environment is important for long-term team viability. • The team is taking steps to reduce their environmental impact and building environmental sustainability into team activities. • The team understood the goals of the competition and the mission of <i>FIRST</i>. • The team must be able to explain: <ul style="list-style-type: none"> ○ What team sustainability practices are in place such as recruiting and training future team members. ○ How the team keeps students, mentors, and sponsors actively engaged by making decisions and dividing their workload ○ How the team celebrate success and document lessons learned to prevent repeating mistakes ○ How the team assesses its environmental impact and what the team does to mitigate or reduce it. ○ How the team’s environmental sustainability strategy impacts their team longevity. ○ How the team is funded and how the team budgets, including potential revenue from sustainability practices like metal recycling

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Team Attributes Awards Questions

- How has *FIRST* changed you? Your team? Your school?
 - What team accomplishment makes you most proud?
- Outside of your team, who has given you the most help this year? How?
 - Who have you helped this season?
- What have been the top priorities for your team this year?
 - How did you establish them?
 - What has your team focused on improving this year?
- How has your team spread the *FIRST* Core Values in your school? In the community?
- Tell us how your team has demonstrated *Gracious Professionalism*[®] and/or *Coopertition*[®].
- Has your team done any community outreach?
 - Does your team have any involvement with *FIRST*[®] Tech Challenge or *FIRST*[®] LEGO[®] League?
- How does your team support *FIRST* core values?
- How does your team integrate imagery and branding?
- How does your team find and "Thank" your sponsors/supporters?
- How does your team keep students, mentors, and sponsors actively engaged?
- How does your team celebrate success and document lessons learned to prevent repeating mistakes?
- Describe what your team does related to environmental sustainability.
- How does your team budget for the season?
 - How does your team ensure there's funds/resources available for future seasons?
- Do you have a succession plan? Can you describe it?
- Did your team discuss potential risks for the season? Describe your contingency plan
- How do you ensure that your team is following correct safety practices?
- **FINAL QUESTION... Is there anything you would like to tell us about your team that we didn't cover?**