Guide to Judging

2023-2024

FOR VIQRC, VRC, AND VEX U PROGRAMS

Table of Contents

Updates

This document may be updated on June 15, August 15, December 15, and April 15. Any significant changes will be listed below.

June 15, 2023

- The Judges Award can optionally be given to two different teams at an event.
- The criteria for the Excellence Award have been modified.
- Excellence Award requires an Autonomous Coding Skills Challenge score.
- Teams must be in the top 30% of teams at the event for both Qualification Rankings, Skills Challenge Rankings, and Autonomous Coding Skills Rankings
- There is no minimum number of teams to be made eligible for the Excellence Award based on performance metrics.
- An Excellence Award Criteria Checklist is added.
- The Innovate Award description has been changed to be based on a specific aspect within a Team's Engineering Notebook
- The criteria for the Innovate Award have been modified.
- The criteria on the Engineering Notebook Rubric have been modified to include additional criteria.
- Slight changes to other award descriptions and criteria verbiage
- Changes made to Engineering Notebook for ease of use, understanding, and to be more in alignment with Award criteria.

The June 15, August 15, December 15, and April 15 updates will be itemized here when they are released.

Note: For events occurring between December 15-25, both this version and the previous version of the Guide to Judging as well as printable judging materials are valid for use in qualifying events. This is so as not to present an undue burden for those running events in this one-week period that may have prepared materials using the previous version. Events occurring after December 25, must use the most up to date judging materials and verbiage found in the current version of the Guide to Judging.

Introduction

Judging is an important part of REC Foundation programs. Through the judging process, students have opportunities to practice both written and verbal communication skills, as well as to demonstrate the values espoused in the Code of Conduct and Student Centered policies. Some awards may also qualify teams to higher levels of competition.

The purpose of this document is to provide the following:

- Policies and procedures for the judging process
- Criteria and descriptions for awards
- Descriptions of the roles of Judges, Judge Advisors, and Event Partners
- Additional tools and materials to conduct the judging process.

This document applies to all events that include Judged Awards for VEX U, VRC, and VIQRC. The goal is to help improve the judging experience for teams, volunteers, and event organizers, as well as increase consistency of the judging process across event regions.

Questions can be asked on the official Judging Q&A. Only the **current season's** Q&A responses are valid. Q&A's from past seasons are no longer valid.

Note: The World Championship judging process may differ from this guide due to the scale and complexity of that event.

Key Terms, Definitions, and Links

Engineering Design Process – The process of exploring the problem, generating, and testing solutions, and documenting results in an iterative process.

Engineering Notebook – The document submitted by a team to record their Engineering Design Process. Notebooks are sorted by Judges, and some will be evaluated according to a rubric.

Event Partner (EP) – The Tournament Coordinator who serves as an overall manager for the volunteers, venue, event materials, and all other event considerations. Event Partners serve as the official liaison between the REC Foundation, the event volunteers, and event attendees.

Finals Matches – A Match used in the process of determining the champion Alliance and occurs after Qualification Matches.

Individual Recognition Awards – Awards that are given to a particular individual rather than a team. An example would be "Volunteer of the Year".

Judge – Person who interacts with teams at an event to help determine winners of judged awards. Those who perform this role online are known as Remote Judges.

Judge Advisor – The coordinator of all Judges at an event. They are responsible for organizing Judge volunteers, guiding deliberations, and relaying the judged award results for the Event Partner/Tournament Manager Operator.

Judged Awards – Awards that are determined by Judges at an event based on standardized criteria and descriptions. An example would be the "Think" award.

Performance Awards – Awards based solely on a team's on-field performance. Examples would be the Tournament Champion Award or Robot Skills Champion Award.

Qualifying – An event is considered "Qualifying" if it meets all of the requirements in the Qualifying Criteria. Certain Performance and Judged award winners at Qualifying events will qualify to the next level of competition, such as a region championship.

Qualification Matches – Matches in which teams are randomly partnered and share a score – all qualification matches factor into a team's ranking for the event and determine which teams move on to Finals Matches. The exact ranking methodology is found in the Game Manual.

RECF – Acronym for Robotics Education & Competition Foundation, the organization which oversees the competition aspects of VRC, VIQRC, and VEX U events.

Team Interview – An interview, typically 10-15 minutes in duration, during which students on a team are interviewed by Judges. Teams demonstrate their ability to explain their robot design and game strategy. The information shared in this interview and the Judge's notes become the basis for award nominations and deliberations.

VEX U – The college/university age level robotics competition program. VEX U is played using the VRC game, with notable exceptions to game play and robot construction contained in the VRC game manual's VEX U Appendix. The student eligibility requirements are outlined in the Game Manual.

VIQRC – Acronym for VEX IQ Robotics Competition, played by Elementary and Middle School age level students. The student eligibility requirements are outlined in the VIQRC Game Manual.

VRC – Acronym for VEX Robotics Competition, played by Middle and High School age level students. The student eligibility requirements are outlined in the VRC Game Manual.

Section 1: Judging Principles

Overview

The following Judging Principles, when taken as a whole, outline an ethos that all of those serving as Judges, Judge Advisors, and Event Partners should follow. The Judging role is a very important one that can make a tremendous impact on the students involved. Judges work together as a part of a larger group in evaluating teams against given award criteria. The ability of all judging volunteers to interact with students and fellow Judges rationally and respectfully is of the utmost importance.

All Judging volunteers should keep the following principles in mind:

Confidentiality

The judging process includes both discussions concerning teams as well as written notes and rubrics. **These must remain confidential.** Judges should take precautions to ensure that any discussions are not overheard by or shared with teams, other event participants, or event staff. **Written judging materials, including Judges notes, rubrics, and awards worksheets are to be given to the Judge Advisor for disposal after the event.**

Those with access to Engineering Notebooks are not to retain them after the event is over in any form, neither physical nor digital, nor retain photos taken for deliberation purposes at the event.

If the Judges notice a team recording an interview or judging notes, either for their own interview or another team's interview, they should **immediately stop the interview** and ask the recording party to cease recording. If they refuse to do so, this may be brought up the Event Partner as a Code of Conduct violation.

Impartiality

Judges should disclose any possible conflicts of interest between them and a team at the event to the Judge Advisor and Event Partner. Judges should not be placed in a position to contribute to discussion or decisions involving that team. Event Partners may not recommend, advise, or assign judged awards to any team. All volunteers involved in judging should take care to remove any outward appearances of conflicts of interest, including team shirts, buttons, or branded items that would appear to favor any team at the event.

Consistency

Engineering Notebooks and Team Interviews should be evaluated under similar conditions. This allows for a more consistent evaluation of each team. This applies to in-person judging at an event and judging for an event that includes both remote and in-person evaluation of notebooks and interviews. For example: Evaluating some notebooks remotely ahead of an event and evaluating others in-person at the event, or allowing some team interviews to last 30 minutes and while others are only 10 minutes long would be violations of this principle, as these instances do not provide a consistent judging experience for all teams and may give some teams advantages over others in the judging process.

Qualitative Judgement

Judges are expected to apply qualitative judgement when making final decisions on all judged awards. For example, while completing the Engineering Notebook Rubric results in a quantitative score, Judges must still deliberate and apply qualitative judgement when making a final determination on the Design Award winner.

Inclusion

Only a limited number of teams at an event will earn a judged award. However, every team at an event must be given an equal opportunity to be interviewed by Judges even if they have not turned in an Engineering Notebook to be evaluated. A team that elects to not participate in Judging by declining to be interviewed is not impacted by this decision in any other part of the competition.

Balance

No team shall be awarded more than one **Judged Award** at an event. Performance based awards such as Tournament Champion, or awards presented to an individual, such as Volunteer of the Year Award **do not** affect a team's eligibility to earn a judged award.

Integrity

Awards should go to the team which best exemplifies the award description and meets the requirements of the award and still adhere to the Balance principle of not awarding more than one judged award per team. Teams at an event should be judged on their merits and behavior at that event only. Judged Awards should not be reallocated based on Performance Awards or awards earned by a team at a past event.

Youth Protection

Judges must not be alone with students. Whenever possible, judges should work with at least one other Judge in a public space such as a pit area. No meetings should take place in a private space unless the team is accompanied by a responsible adult (coach, mentor, or parent). Judges should avoid asking students personal questions that do not relate to the team, event, or robot.

Student-Centered Teams

Teams must be student-centered, which means that students have ownership on how their robot is designed, built, programmed, and utilized in match play with other teams and Robot Skills matches. Through observation, interviews with teams, and considering input from event staff, Judges identify teams that are student-centered, and give higher consideration to teams that favor the enhancement of student learning over teams that favor winning at any cost. Teams that are not student-centered should not receive judged awards. Additional information and guidance on student-centered teams can be found in the REC Foundation Student-Centered Policy.

Team Ethics and Conduct

The REC Foundation considers the positive, respectful, and ethical conduct of teams to be an essential component of the competition. A team includes the students, teachers, coaches, mentors, and parents associated with the team. All participants are expected to act with integrity, honesty, and reliability and operate as student-centered teams with limited adult assistance. Judges will consider all team conduct when determining judged awards. This is covered in greater detail by the RECF Code of Conduct and Student-Centered Policy.

Section 2: Judging Roles

Overview

The purpose of this section is to ensure a consistent judging process is followed at all VEX U, VRC, and VIQRC Qualifying Events, the planning and execution of which are led by adult individuals known as Event Partners. This section describes the roles and responsibilities of the Judges, Judge Advisor, and Event Partner in the Judging process.

In VEX U, VRC, and VIQRC Qualifying Events, teams of students showcase their knowledge and skills in designing, building, and programming a robot. Students demonstrate their knowledge of the Engineering Design Process by documenting their design process in an Engineering Notebook.

Students exhibit their driving skills and game strategy during match play and skills challenges. All these activities are to be completed by the students with minimal adult assistance. Students must make the decisions, complete the work, and demonstrate their learning and knowledge to Judges for their team to qualify for Judged Awards.

All Judge volunteers should take care to dress appropriately for the role, such as wearing comfortable footwear and professional attire. Judge volunteers should avoid wearing any clothing or items that would give the appearance of a conflict of interest with any team at the event.

Judge Advisor

- Must have passed Judge Certification Course
- Organize and oversee the overall judging process at an event.
- Facilitate deliberations and deliver final award winners to Event Partner
- Judge Advisor age requirements
  - **VEX U –** Must be at least age 21 or older.
  - **VRC –** Must be at least age 20 or older and not part of a VRC team competing at the event.
  - **VIQRC –** Must be at least age 20 or older.
  - **Note:** Any exceptions to the volunteer age rules would be rare and would require approval from the REC Foundation Manager

Judge

- Judges evaluate teams to determine eligibility for Judged Awards
- Judges who interact directly with students **must** work in groups.
- Judge Volunteer age requirements
  - **VEX U –** Must be at least age 21 years or older.
  - **VRC –** Must be at least age 18 years or older and not part of a VRC team.
  - **VIQRC –** Must be at least age 18 years or older. Younger volunteers ages 16-17 may be judges **if paired with another judge who is 18 or over**. Volunteers in this situation should be mindful of Youth Protection: An adult must not be in a situation where they are alone with minors.
  - **Note:** Any exceptions to the volunteer age rules would be rare and would require approval from the REC Foundation Manager

Event Partner

- The Event Partner oversees the planning and operation of the entire event, and provides support for the Judges and Judge Advisor.
- The Event Partner is an Adult over the age of 18 that is not a student on a VRC team.
- The Event Partner and Judge Advisor must be two different eligible people – an Event Partner may not serve as a Judge Advisor at their own event, and Event Partners may not recommend or assign Judged Awards to any team.
- The Event Partner and the Judge Advisor should work together to come up with a schedule for judging teams at the event, and to ensure there are adequate Judges for the event. **If judging in person, it is recommended to have 2 Judges for every 8-10 teams at an event to conduct interviews, plus additional judges to evaluate notebooks**. At smaller events the same judges can likely conduct both interviews and Engineering Notebook evaluations. Larger events are advised to have dedicated Engineering Notebook judges.
- It is helpful that some, if not all, Judges have a background in STEM or robotics in order to evaluate the more technical awards. Good sources of volunteers can be local STEM-based companies or sponsors, local colleges, VEX U teams, and program alumni.

Section 3: Event Preparation and Execution

Overview

The process of preparing for judging needs to be taken into consideration in the initial stages of event planning. The success of Judging at an event takes coordination between the Event Partner, the Judge Advisor, and Judge volunteers. The size of the event, the number of awards given out, the event agenda, and volunteer recruitment all impact the judging process.

Prior to Event – Tasks by Role

EVENT PARTNER

- Recruit a qualified Judge Advisor that would not have any conflicts of interest with teams at the event.
- Collaborate with the Judge Advisor to recruit and select Judges well in advance to ensure there are enough Judges to meet the needs of the event.
- Ensure that there is a secure and quiet room with adequate space for the judging staff to deliberate. Only the judging staff and specifically authorized volunteers for the event should have access to this room.
- Know and understand the roles of the Judges and the Judge Advisor.
- Ensure that the Judging staff has appropriate judging materials, including clipboards, pens, highlighters, sticky-notes, copies of current Judging documents such as rubrics and note taking sheets, and other needed items. **These documents cannot be modified or replaced with unofficial versions.**

JUDGE ADVISOR

- Must have passed Judge Certification Course
- Have no conflicts of interest with any teams attending the event.
- Review with the Event Partner the awards to be offered at the event.
- Work with Event Partner to ensure adequate Judges are recruited and confirm their attendance and skill sets.
- Manage any potential conflicts of interest that individual Judges may have with teams at the event.
- Prepare a judging schedule based on the number of teams registered and the agenda for the event.
- Formulate a clear process for how Engineering Notebooks will be collected and judged.
- Confirm with the Event Partner that the Judging staff will have all appropriate and current judging materials and documents, including team lists and match sheets from the event's Tournament Manager Operator. **These documents cannot be modified or replaced with unofficial versions.**

JUDGE

- Review the game video and game description to understand the fundamentals of the game that teams will be playing.
- Communicate any potential conflicts of interest that they may have with teams at the event with the Judge Advisor
- Complete the Judge Certification Course
- Be familiar with the current judging materials including official judging documentation, rubrics, and award descriptions. **These documents cannot be modified or replaced with unofficial versions.**

Event Day – Tasks by Role

EVENT PARTNER

- Ensure Judging staff have all needed materials and access to the secure Judging Room
- Communicate any schedule changes to the Judge Advisor
- **Event Partners may not recommend or assign judged awards to any team.** They may recommend or assign awards given to individuals, such as the Volunteer of the Year Award.
- The Event Partner should do a final check to ensure no team is being given more than one **judged award**. If a team was assigned multiple judged awards, the Event Partner should consult with the Judge Advisor to rectify the situation.

JUDGE ADVISOR

- Review the judging process with Judges prior to the start of the event and answer any questions they may have.
- Review list of submitted Engineering Notebooks
- Ensure Judges sign in on the Judge Volunteer Check-In Sheet
- Group Judges and assign each group a subset of teams to interview, managing potential conflicts of interest. This may be done prior to the event. Judges should not be placed in a position to interview or deliberate for teams with which they have such a conflict.
- Assign Judges with pre-existing relationships to each other, or with similar backgrounds to different Judge groups so that teams are interacting with Judges who have different perspectives and backgrounds.
- Manage time and ensure judging groups are keeping pace to interview all teams on schedule.
- Lead deliberations for judged awards
- Collect field notes to Judges from event staff prior to final deliberations.
- Record the results of all judged awards and communicate the list of award winners to the Event Partner and Tournament Manager operator.
- Have the Tournament Manager operator print the award scripts to be used at the award ceremony.

- Maintain confidentiality of any Judging deliberations and discussions. Teams should not receive any feedback from the Judge Advisor, nor should Event Partners be given specific information discussed by Judges except for reporting Code of Conduct violations.
- Collect all judging materials to ensure confidentiality. After the event, these materials should be destroyed.
- Ensure the process for returning all Engineering Notebooks to teams, if applicable

JUDGE

- Conduct **one or more** tasks depending on the needs at the event, including:
  - Evaluate Engineering Notebooks using the Engineering Notebook Rubric
  - Interview teams in the pit areas and evaluate using the Team Interview Rubric
  - Observe teams in competition.
  - Present awards to teams during Award Ceremony
  - Communicate any potential conflicts of interest with attending teams to the Judge Advisor
- Deliberate with Judges under direction of the Judge Advisor to assign award winners following the guidelines in the official Judging documentation.
- Hand in all judging notes and rubrics to the Judge Advisor
- Maintain confidentiality of any judging deliberations and discussions. Teams should not receive any feedback from Judges aside from positive encouragement and thanks at the end of their interview.

Typical In-Person Event Timeline

The chart below is an example of how the in-person judging process might operate in parallel with the rest of the competition schedule in a typical one-day event.

If Remote Judging is done, Engineering Notebook evaluations and/or initial team interviews will be done before the event. See that section for more details.

Typical In-Person Event Timeline

All Judging Done In Person

TIME	EVENT ACTIVITY	TEAMS	JUDGES/JUDGE ADVISOR
Early Morning	CHECK-IN	Teams check in as present, hand in Engineering Notebooks. Once inspected, teams can run their Skills Challenge Matches.	Judge Orientation/Begin Interviews Judges organized into groups and assigned to interview teams. Interviews can begin as soon as there are Judges assigned to groups, and any questions about the process have been addressed by the Judge Advisor. Notebooks can also start being evaluated at this time
	INSPECTION		
Morning	OPENING CEREMONIES/ EVENT MEETING	Teams attend and ask questions at Event Meeting	
	QUALIFICATION MATCHES	Teams are scheduled into Qualification Matches	Teams will be interviewed during breaks between their matches.
Lunch Break	LUNCH BREAK	Lunch Break: If event is running behind, teams may run matches through this time	Working Lunch discussion so far, each pair of Judges can name top picks for awards so far. Engineering notebooks can also be reviewed at this time.
Early Afternoon	QUALIFICATION MATCHES	Teams are scheduled into Qualification Matches	Finish Judging Interviews & begin final deliberations. Judge Advisor should collect the final Skills Challenge and Qualification Rankings from the Tournament Manager Operator, as well as any field notes to Judges. If additional interviews are needed, they should be done before qualification matches are over
Afternoon	ALLIANCE SELECTION/ ALLIANCE PAIRINGS	Teams undergo alliance selection (VRC) or Alliance pairings (VIQRC) or have a short break before finals (VEX U).	Final Deliberations. Teams should not be interviewed during this time; decisions should be made with the data at hand. Once all awards are decided, Judge Advisor takes them to the Event Partner/Tournament Manager Operator to be put into Tournament Manager. Any Engineering Notebooks should be returned to teams.
End of Day	ELIMINATION/FINALS MATCHES	Teams play in Finals/receive awards. Some events may intersperse awards with finals matches, others may have an awards ceremony afterwards.	
	AWARDS/CLOSING CEREMONIES		Judge Advisor collects and destroys notes and rubrics, & clears the judging room of any identifying info. Judges may be asked to read award scripts, present awards, or just be visible for teams. Event Partner should plan this beforehand.

Section 4: Awards

Overview

The Qualifying Criteria contains charts that indicate which Awards will qualify teams from local events to a Regional or World Championship event. The exact number of qualifying spots allocated to each event is determined by the REC Foundation Manager for that region, and can be found on that event's information page on RobotEvents.com.

There are two types of qualifying awards at REC Foundation-qualified competitions.

- **Performance Awards:** Based on robot performance on the competition field in match play (Tournament/Teamwork Champion, Finalist/Second Place, etc.) and Skills Challenges (Robot Skills Champion, Robot Skills Second Place, etc.). Performance Awards do not impact the eligibility of a team to earn a Judged Award.
- **Judged Awards:** Based on the award criteria. Judges, in coordination with the Judge Advisor, determine judged awards using the REC Foundation judging process, award criteria, and rubrics. Event Partners who choose to include judging at their event may choose which awards are offered in accordance with the Qualifying Criteria. The selection of judged awards may vary, but the Excellence Award, Design Award, and Judges Award are required. Single page award descriptions can be printed out for use in Judge Deliberations.

Each Award only occurs in a single instance at each event with the exception of the Excellence Award, which **may** be given to one team in each grade level at eligible blended events in accordance with the Qualifying Criteria, and the Judges Award, which is required to be given out in once instance, and optionally may be given out in a second instance at an event. If **no team** meets the requirements for an award, that award should not be given out at an event.

The precedence of Judged Awards is Excellence, Design, Innovate, Think, Amaze, Build, Create, Judges, Inspire, Energy and Sportsmanship. This precedence is found in the Qualifying Criteria and is the same precedence as qualifying spots to the next level of competition.

Additionally, there may be two other types of awards presented at some events:

- **Individual Recognition Awards:** Recognize the contributions of a volunteer, mentor, teacher, or sponsor, and are determined by the Event Partner. Judges do not determine individual award winners. Event Partners may create their own process for judging these awards if needed.
- **Custom Awards:** While nearly all events choose to use standard awards, it is possible to give out custom awards using the Tournament Manager software. To help prevent confusion, Event Partners should ensure that teams understand which awards being presented are custom awards specific to the event.

Judged Awards

DESIGN AWARD

The **Design Award** recognizes an organized and professional approach to the Engineering Design Process, project and time management, and team organization. Student demonstration of the Engineering Design Process is fundamental to the educational value of REC Foundation programs. The Design Award recognizes a team's ability to document and explain their Engineering Design Process via an Engineering Notebook and Team Interview. The Design Award is a required award if judging is being conducted at an event.

Key criteria of the Design Award are:

- Be at or near the top of Engineering Notebook Rubric rankings.
- Exhibit a high-quality team interview.
- Engineering Notebook demonstrates clear, complete, and organized record of an iterative Engineering Design Process.
- Team demonstrates effective management of time, talent, and resources.
- Team interview demonstrates their ability to explain their robot design and game strategy.
- Team interview demonstrates effective communication skills, teamwork, and professionalism.
- Engineering Notebook and Team Interview demonstrate a student-centered ethos.

Additional notes:

- The submission of an Engineering Notebook is a requirement for the Design Award – if no team meets the requirements for this award, it should not be given out at an event. If this is the case, event attendees should be given a brief explanation as to why. The quality of a team's Engineering Notebook and Team Interview may play a role in the consideration of that team for other award categories.
- To be in consideration for the Design Award at the World Championship, teams are required to have earned the Excellence or Design Award at an event which is directly qualifying teams to the World Championship. Exceptions to this requirement may be made based on geographic circumstances.

EXCELLENCE AWARD

The **Excellence Award** recognizes overall excellence in both the Judged Award and the Performance Award categories. The Excellence Award incorporates all the criteria of the Design Award, **plus** the added component of a team's on-field performance at the event. The Excellence Award is a required award if judging is being conducted at an event.

Key criteria of the Excellence Award are:

- Be at or near the top of all Engineering Notebook Rubric rankings.
- Exhibit a high-quality team interview.
- Be ranked in the top 30% of teams at the conclusion of qualifying matches.
- Be ranked in the top 30% of teams at the conclusion of the Robot Skills Challenges
- Be ranked in the top 30% of Autonomous Coding Challenge rankings at the conclusion of the Robot Skills Challenges
- Be a candidate in consideration for other Judged Awards
- Demonstrate a student-centered ethos.
- Exhibit positive team conduct, good sportsmanship, and professionalism.

Additional notes:

- Under certain conditions, at events which combine both grade levels (Middle School and High School for VRC, Elementary School and Middle School for VIQRC), one Excellence Award per grade level may be awarded. This is determined by the REC Foundation Manager and the Qualifying Criteria.
- In the instance of two grade level specific Excellence Awards being given out at an event, teams are to be compared only among teams of the same grade level. For quantitative event data, determining the rankings by age group can be done by using the “Team List”, “Qualification Rankings”, and “Skills Challenge Rankings by Age Group” reports from the **Reports** tab in Tournament Manager at the event.
- Excellence Award criteria, including performance metrics, are intended as a threshold for eligibility. Qualitative judgement on the part of judges is needed to discern an Excellence Award winner from among eligible candidates.
- Submission of an Engineering Notebook is a requirement for the Excellence Award. If no team meets the requirements for this award, it should not be given out at an event. If this is the case, event attendees should be given a brief explanation as to why.
- To be in consideration for the Excellence Award at the World Championship, teams are required to have earned the Excellence or Design Award at an event which is directly qualifying teams to the World Championship. Exceptions to this requirement may be made based on geographic circumstances.

INNOVATE AWARD

The **Innovate Award** recognizes an effective and well documented design process for a novel aspect of team’s design. The team should indicate for the judges where this aspect can be found in their Engineering Notebook. The team who earns the Innovate Award should be among the top contenders for the Design Award. The submission of an Engineering Notebook is a requirement for the Innovate Award.

Key criteria of the Innovate Award are:

- Teams identify in their notebook a specific section or specific pages covering the origin and development of a design element, strategy, or other attribute that is a key part of their team's robot design or gameplay.
- This design element, strategy, or other attribute is unique or uncommon among teams at the event.
- The development of this design element, strategy or other attribute is well-documented from initial conception through execution.
- Engineering Notebook demonstrates a clear, complete, and organized record of the robot design process.
- Team demonstrates effective management of time, talent, and resources.
- Team interview demonstrates their ability to explain their robot design and game strategy.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

THINK AWARD

The **Think Award** recognizes the most effective and consistent use of coding techniques and programming design solutions to solve the game challenge.

Key criteria of the Think Award are:

- Participation in the Autonomous Coding Skills Challenge, with a score greater than zero
- Autonomous programming is consistent and reliable.
- Programs are cleanly written, well commented, and easy to follow.
- Team clearly explains the programming strategy to solve the game challenge.
- Team clearly explains their programming management process/version control.
- Students understand and explain how they worked together to develop their robot programming.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

AMAZE AWARD

The **Amaze Award** recognizes a consistently high-performing and competitive robot.

Key criteria of the Amaze Award are:

- Robot consistently contributes to high-scoring matches with their alliance partner.
- Robot performs at a high level in Driving Skills and Autonomous Coding Skills at the event.
- Robot is designed and constructed to consistently execute an effective game strategy.
- Robot programming is effective and consistently successful.
- Students understand and explain how they worked together to develop their robot design.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

BUILD AWARD

The **Build Award** recognizes a well-constructed robot that is constructed with a high degree of attention to detail in order to hold up to the rigors of competition.

Key criteria of the Build Award are:

- Robot construction is durable and robust.
- Robot is reliable on the field and holds up under competition conditions.
- Robot is designed with attention to safety and detail.
- Students understand and explain how they worked together to develop their robot design.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

CREATE AWARD

The **Create Award** recognizes a creative engineering design solution to one or more of the challenges of the competition.

Key criteria of the Create Award are:

- Team demonstrates a creative approach to accomplish game objectives.
- Team has committed to ambitious and creative approaches to solving the game challenge.
- Students understand and explain how they worked together to develop their robot design and game strategy.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

JUDGES AWARD

The **Judges Award** recognizes attributes that may not fit in other award categories and the Judges felt were deserving of special recognition. The Judges Award is a required award if Judging is being conducted at an event. Optionally, a second Judges Award may be presented at an event at the discretion of the Event Partner and Judge Advisor. This is the only Judged Award that may be presented in more than one instance at an event.

Key criteria of the Judges Award are:

- Team displays special attributes, exemplary effort, or perseverance at the event.
- Team overcomes an obstacle or challenge and achieves a goal or special accomplishment.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

ENERGY AWARD

The **Energy Award** recognizes outstanding enthusiasm and excitement at the event.

Key criteria of the Energy Award are:

- Team maintains a high level of enthusiasm and excitement throughout the event.
- Team exhibits a passion for the robotics competition that enriches the event experience for all.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

INSPIRE AWARD

The **Inspire Award** recognizes passion for the competition and positivity at the event.

Key criteria of the Inspire Award are:

- Team exhibits passion and positive attitude at the event.
- Team exhibits integrity and goodwill toward other teams, coaches, and spectators.
- Team overcomes an obstacle or challenge and achieves a goal or special accomplishment at the event.
- Students demonstrate teamwork and effective communication skills.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

The **Sportsmanship Award** recognizes a high degree of good sportsmanship, helpfulness, respect, and a positive attitude both on and off the competition field.

Key criteria of the Sportsmanship Award are:

- Team is courteous, helpful, and respectful to everyone, on and off the field.
- Team interacts with others in the spirit of friendly competition and cooperation.
- Team acts with honesty and integrity, enriching the event experience for all.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos.

Individual Recognition Awards

The **Mentor of the Year Award** recognizes a team mentor who has helped students achieve goals that were seemingly out of reach. This individual is a role model, a leader, and an extraordinary mentor who helps show students new ways to expand their knowledge and solve problems in the world of STEM.

The **Partner of the Year Award** recognizes an organization that consistently supports students and schools as they pursue excellence in competitive robotics. There are many partners and organizations that deserve recognition for their support of the REC Foundation and VEX competitions. The recipient of this award is recognized as a champion who dedicates their time, abilities, and resources to ensure affordability and accessibility for all participants.

The **Teacher of the Year Award** recognizes a teacher who shows true leadership and dedication to their group of students. The winner of this award continually exceeds expectations to ensure a safe, enjoyable, and educational experience for all students.

The **Volunteer of the Year** Award recognizes an individual at the root of each event who leads the effort to "make things happen". Hosting a robotics event takes the collective effort of many people who are willing to give their time and effort for the sake of the participants. The Volunteer of the Year demonstrates a commitment and devotion to their community, putting in many hours of hard work with persistence and passion to make events happen.

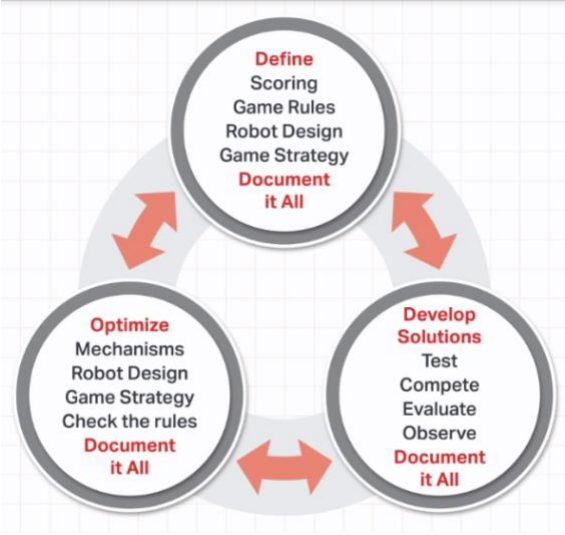
Section 5: Judging Engineering Notebooks

Overview: The Engineering Notebook

REC Foundation programs help students develop life skills that they may use in their academic and professional future. Documenting work in an Engineering Notebook is a widely used engineering and design industry practice. By following the Engineering Design Process and documenting that process in an Engineering Notebook, students practice project management, time management, brainstorming, effective interpersonal and written communication skills.

The Engineering Design Process is iterative: Students identify and define a problem, brainstorm ideas to solve the problem, test their design ideas, and continue to refine their design until a satisfactory solution is reached. Students will encounter obstacles, successes, and setbacks as they work through the Engineering Design Process. All of these should be documented by the students in their Engineering Notebook.

Below is an example graphic outlining the steps of the Engineering Design Process:



In REC Foundation programs, the Engineering Notebook **is required** for the Excellence, Design, and Innovate Awards, but is **not a requirement** for other awards. Submitting a notebook is **not** required for a team to receive an in-person interview, and all teams at an event must be given the opportunity to be interviewed.

Teams may use the notebook available from VEX Robotics, or they may purchase a different form of physical notebook. Teams may also use any one of various computer applications or cloud-based services available for digitally creating and maintaining a Digital Engineering Notebook. Please see the section on Remote Judging for more information on Digital Engineering Notebook submissions. Regardless of the format, all notebooks are evaluated by the Judges according to the same award criteria and rubric. Engineering Notebooks should contain these elements:

- Team number on the cover/beginning of document.
- Errors crossed out using a single line (so errors can be seen)
- Unedited entries
- All pages intact; no pages or parts of pages removed.
- Each page/entry chronologically numbered and dated.
- Each page/entry signed or initialed by a student author.
- Team meeting notes as they relate to the design process.
- Permanently affixed pictures, CAD drawings, documents, examples of code, or other material relevant to the design process (in the case of physical notebooks, tape is acceptable, but glue is preferred)

Outstanding Engineering Notebooks should contain these additional elements:

- Table of contents
- Entries are dated with the names of contributing students included.
- Notebook begins with the first team meeting.
- Descriptions, sketches, and pictures of design concepts and the design process
- Observations and thoughts of team members about their design and their design process
- Records of tests, test results, and evaluations of specific designs or design concepts
- Project management practices including their use of personnel, financial, and time resources.
- Notes and observations from competitions to consider in the next design iteration.
- Descriptions of programming concepts, programming improvements, or significant programming modifications
- Enough detail that a person unfamiliar with the team's work would be able to follow the logic used by the team to develop their design, and recreate the robot design using only the Engineering Notebook

Note: If the Engineering Notebook is written in a language that is not common for the region, it is the team's responsibility to provide the original language version along with a translated copy, if any Judges fluent in the original language are not available. This should be brought to the Event Partner's attention as early as possible so they can inform the Judge Advisor.

Note: Different teams may submit notebooks with varying levels of sophistication and beautification. For example, some teams may have brief sketches in pen, others may have colorized illustrations or CAD/electronic drawings. Judges should be cognizant of evaluating the **content** of notebooks, not the level of beautification. It is possible for many different types of notebook and different communication styles to present relevant content explaining the design process.

Notebook Submission Format

The choice of judging format for the event rests with the Event Partner. Detailed information about judging should be found on the event page on RobotEvents. All teams at the event must submit their notebooks in the same format, regardless of its native format. A team with a physical engineering notebook will need to upload a link to a digital copy via RobotEvents, or conversely, a team with a digital engineering notebook may be asked to print it out prior to the event.

Irrespective of whether the notebook is submitted digitally or in-person (physical notebook), teams are responsible for their notebook's formatting, presentation, and ensuring all materials are properly organized, including numbering and/or dating pages.

Engineering Notebook Judging Process

STEP 1 – SORTING THE NOTEBOOKS

Judges perform a quick scan of all the Engineering Notebooks and divide them into two categories: **Developing** and **Fully Developed**.

Developing Engineering Notebooks contain little detail, will have few drawings, and will not be a complete record of the design process. To save Judges' time, the Engineering Notebook Rubric will not be completed for these teams. However, all Engineering Notebooks should be retained until the end of judging deliberations.

If it is unclear whether a notebook should be categorized as Developing or Fully Developed, either another Judge can help make that determination, or the notebook should be given the benefit of the doubt and scored using the rubric.

Fully Developed Engineering Notebooks contain great detail, and will include detailed drawings, tests and test results, solutions to problems the team encountered, and will be a complete record of the design process. Notebook attributes for Fully Developed notebooks will be scored as Emerging, Proficient, and Expert on the Engineering Notebook Rubric. Only Fully Developed Notebooks should be considered for any awards requiring a notebook. The absolute minimum for a notebook to be considered "Fully Developed" would be the first four criteria of the rubric, outlining the initial design process of a single iteration.

STEP 2 – COMPLETING THE ENGINEERING NOTEBOOK RUBRIC

Fully Developed notebooks will be scored and ranked using the Engineering Notebook Rubric. Roughly the top 30% of Fully Developed notebooks will be in consideration for the Design, Excellence and Innovate awards. They may be initially ranked according to their rubric scores, then be re-ranked according to further qualitative evaluation by Judges.

Judges should review the notebook to identify the proficiency level of the student entries for each of the Engineering Notebook Rubric criteria. There will likely not be enough time to do a page-by-page reading of every notebook. Judges should focus on the entries associated with the Rubric criteria and proficiency level to determine the scores for each Fully Developed notebook. It is recommended that at least two judges score each Fully Developed notebook, and the first few notebook scores be discussed so that judges can "calibrate" scores to be consistent across the event. Additional judges may review the top scoring notebooks and interview those teams to support the final ranking of the notebooks.

Note: The Engineering Notebook Rubric is a tool for initial notebook evaluations to determine eligibility for the Design and Innovate awards through quantitative comparison. The final determination of those award winners are done through further qualitative deliberation among judges.

Section 6: Team Interviews

Overview

The Team Interview Rubric is used for all team interviews. Judges may use the Team Interview Tips and Sample Questions and Team Interview Notes to assist in team interviews. Judges will interview the teams that have been assigned to them by the Judge Advisor. Teamwork, professionalism, interview quality, and team conduct shall be considered in nominating and ranking teams for all judged awards.

Team Interviews should be conducted in the team pit area. This allows Judges to observe teams at work and quickly move from team to team. Judges need to talk to students, not adults. Occasionally enthusiastic adults may want to answer the Judge's questions. If this is encountered, politely remind the adult(s) that the Judges are there to interview the students. All teams at an event must have an opportunity to be interviewed at least once.

Award finalists may be cross interviewed by different Judge Teams as a part of the deliberation process. The Judge Advisor will assign additional interviews as needed during the event.

Note: Some students, whether it be from individual or cultural differences, may have varying styles of interacting with judges during the interview process. Maintaining eye contact, speaking in a loud enough voice to be easily heard, and other engagement norms, may differ between students. **Judges should do their best to give all teams a fair interview and should strive to not allow factors that are beyond students' control to bias their evaluation of the team.**

Note: Judges should avoid using humor or language that could be interpreted as disparaging: For example: "I can't believe you came up with this on your own!" might have been intended as a compliment to the team, but could be misinterpreted to mean that the judges believe the team is violating the Code of Conduct.

Note: Some Judge Advisors may wish to create a list of questions for judges to ask that are common for all interviews at an event. This could be particularly helpful to ensure that all aspects of the robot and competition are being addressed, or to assist inexperienced judges with the interview process. This should not be construed as a "script" – judges should be free to ask to follow up questions based on student responses.

STEP 1 – CONDUCTING THE TEAM INTERVIEW

- All teams should be interviewed for roughly the same amount of time – the Judge Advisor will create a schedule based on the number of teams and Judges at an event.
- Typically, a Team Interview lasts about 10-15 minutes – staying on schedule is important to ensure all teams are interviewed and there is sufficient time to conduct deliberations. Teams that may need an interpreter to communicate with judges may need more time, and should notify the Event Partner upon registration. Team interviews are based around Judges directly asking students **open-ended questions** about their robot and design process in order to shed light on their design process, teamwork, and journey throughout the season. Follow-up questions are asked as needed.
- Teams can use their Robot, Engineering Notebook (optional), and Programming laptop to show their code (optional) during the interview – other reference materials, props, or audio/visual aids should not be used to supplant these primary materials for the interview. For example, it would not be permissible for a team to read from pre-written materials in response to an interview question.
- Judges should take notes during interviews and observations to support their evaluations and assist with deliberations – The Team Interview Notes form can be used to keep track of notes for each team.
- Judges should consider taking a picture of each robot with the team number visible to help recall details about robot designs mentioned in their notes.
- If Judges are unable to locate an assigned team for an interview after several visits to the team's pit area, they will leave a Judges' Note to Missed Teams on the team pit table.
- If Judges are unable to locate an assigned team's pit area, they should contact the Judge Advisor for assistance.
- Judges should remember that younger students communicate their ideas differently than older students. Judges should use age-appropriate language when asking questions and considering student responses.
- The Judging Single Page Reference may additionally be used by Judges to look up award description briefs and other useful information.

STEP 2 – COMPLETE TEAM INTERVIEW RUBRIC

After the interview, each Judge group should complete the Team Interview Rubric and optionally the Initial Award Candidate Ranking Sheet for each team. Judges should go somewhere private to discuss and fill out these forms and should take care that their discussions are not overheard by any other party.

Judges should identify student-centered teams with positive, respectful, and ethical conduct during the team interviews and team observations; conversely, they should also make note of any teams that are not demonstrating these principles – including teams that are not being directly interviewed.

The rubric is not meant to provide a comprehensive quantitative matrix for the team interview, but rather to help sort responses into categories that serve as a baseline for judge deliberations and the judges' individual qualitative judgment.

STEP 3 – IDENTIFY INITIAL CANDIDATE TEAMS WITHIN JUDGE GROUP

Where additional Judged Awards are offered at an event (beyond the Excellence, Design, and Judges Awards), the Judge Advisor may provide the Initial Award Candidate Ranking Sheet to Judge groups assigned to interview teams. The Judge groups will use both Team Interview Rubric and the Initial Award Candidate Ranking Sheet as they interview their group of teams. This form may also be useful when initial team interviews are being done remotely (see section on Remote Judging) as a way to log nominations from each judging group.

On the Initial Award Candidate Ranking Sheet, Judges will write down the team numbers of the teams they are assigned to interview on the left side and fill in any additional Judged Awards being offered at the event. Awards should be listed according to precedence from left to right, with qualifying awards in the leftmost columns, followed by the non-qualifying awards. The precedence of Qualifying Awards is listed in the REC Foundation Qualifying Criteria document. The Judge groups will then use the spaces provided to indicate a candidate for each of the additional Judged Awards being offered at the event.

As Judges interview teams, they may want to use multiple stars or checks on the Initial Award Candidate Ranking Sheet to give weight to a recommendation. This is done by adding check marks to rank teams – for example, the first team interviewed received one check mark, and if the second team interviewed would be a better candidate, they would receive one check mark, and the first team would receive a second check mark, ranking them 1 & 2. This would continue until all teams are interviewed – the end result would be a ranking of teams.

Below is an example of how this sheet might be filled out by one Judge group, judging a subset of teams at a larger event. In this example the Innovate, Think, and Judges awards have been filled in below.

TEAM NUMBER	DESIGN AWARD	INNOVATE AWARD	THINK AWARD	JUDGES AWARD	
	Communicating the Engineering Design Process	Communicating the Engineering Design Process	Effective programming and autonomous strategy	Special Recognition	
TEAM A		✓✓✓		✓	
TEAM B	✓✓	✓	✓✓	✓✓✓	
TEAM C	✓✓✓		✓		
TEAM D	✓	✓✓	✓✓✓	✓✓	

This is a simple way for Judges to preliminarily rank their recommendations as they go, with final rankings done after their set of interviews are completed. Additionally, Judges can also make notes on the Team Interview Notes Sheet.

Section 7: Award Deliberations

Overview

Award deliberation is the last vital step in the Judging Process. In this step Judges will work with the Judge Advisor and one another to select candidates for each award, and create a plan of action for gathering any follow-up information for final decisions.

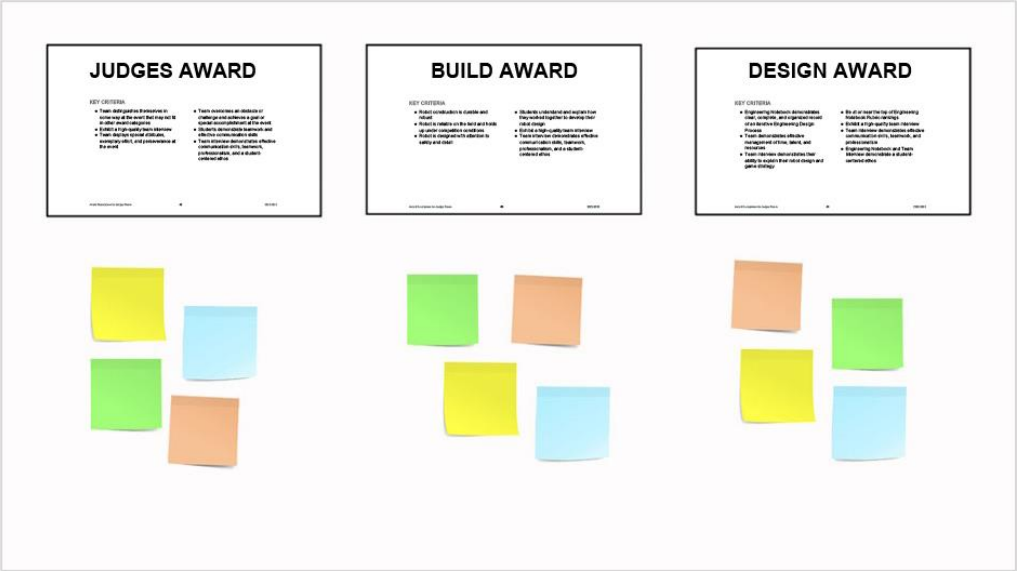
Award Deliberations involve comparing teams to one another. The integrity of the Judging Process depends on all Judges being able to speak candidly during this process. What transpires during deliberations is particularly sensitive information. Therefore, all judging deliberation notes and conversations need to be kept confidential during and after the event.

The Engineering Notebook Rubric and Team Interview Rubric are tools to assist with deliberations. A team's score, whether a specific line-item on a rubric or the overall score, is a data point that the Judges/Judge Advisor can use as a part of the process. It is not a replacement for qualitative judgements in the deliberation process.

STEP 1 – AWARD NOMINATIONS FROM EACH JUDGE GROUP

After Judge groups have interviewed their subset of teams, they should decide which one or two teams from their subset of interviews are candidates for each award. Judges do not need to nominate a team for every award. They should return to the Judges' Room and share their nominations with the rest of the Judge volunteers and Judge Advisor. Often this takes the form of Judges affixing sticky notes with team numbers written on them, under a printout of each award name, in full view of other Judge groups who are also doing the same.

Award Description sheets can be found at the end of this document and can be printed out and used to help visually organize judge input/candidate teams during deliberations. Color coding can help keep the nominations from each Judge group organized (see picture below).



The end result will be a shortlist of nominations for each award from all Judge groups. When there are many award nominations for each award, the Judge Advisor may ask Judge groups to withdraw weaker candidates from consideration, based on brief arguments for and against each nomination. For example, if a team was nominated for the Think Award, but did not score highly in autonomous programming, they may not be a strong candidate. Or a Judge group, upon considering the merits of other candidates, might withdraw their nomination for their initial candidate.

STEP 2 – CROSS-CHECKING AWARD NOMINEES

This step should be completed before the end of Qualification Matches. The Judge Advisor will then organize Judge groups to go out and gather further information to validate the short list of award nominees. This may take the form of observing skills or qualifying matches and observing behavior in the pits, as well as potentially conducting follow-up interviews with award nominees. The goal is to come up with a final ranking of nominees for each award being presented.

For follow-up interviews, it is recommended that the nominees are interviewed by Judges that have not interviewed them previously. If possible, put Judges together who share an area of expertise to evaluate particular awards. For example, Judges who have a background in programming/computer science would likely be best qualified to evaluate the finalist nominees for the Think Award.

STEP 3 – FINAL RANKING AND NOMINATIONS

The next step is the final deliberation for each award at the event. This step should be complete shortly after the beginning of Finals/Elimination Matches. Quantitative data needed for deliberations for certain awards can be obtained from the “**Team List**,”

"**Qualification Rankings**," and "**Skills Challenge Rankings by Age Group**" reports from the **Reports** tab in Tournament Manager at the event.

If follow-up interviews were conducted, the Judges who conducted the follow-up interviews should be the ones to deliberate and create a ranking among those teams. It is a best practice to have first-choice award nominees, plus three or more additional alternate candidates.

If information comes to light that a team may have violated the Code of Conduct or Student Centered Policy, either by judge observations or from Volunteer Field Notes to Judges, that team's consideration for the judged award should be scrutinized by the Judge Advisor. If there is found to be merit in that information, the award is given to the next alternate team in the award nomination ranking.

Volunteer Field Notes to Judges should be retained by the Judge Advisor and communicated to the Event Partner and the REC Foundation for possible follow up to Code of Conduct violations. Hopefully this is a rare occurrence, but proper communication is important for transparency and to ensure that consequences for actions involving the Code of Conduct are being applied fairly.

In the case of the Excellence Award, that winner should come from the list of Design Award finalists meeting the Performance and other Judged Awards criteria. Moving a team from being a Design Award finalist to Excellence Award winner may result in a reshuffling of winners for other awards such that no team earns more than a single judged award at the event. The Judge Advisor should reconcile award winners to ensure that each award winner is earning the highest award at the event for which they are eligible. Having three or more ranked candidates for each award is very helpful in this situation and eliminates the need for additional deliberations. Award precedence is as follows: Excellence, Design, Innovate, Think, Amaze, Build, Create, Judges, Inspire, Energy and Sportsmanship.

For Example: Two forms are shown below. Figure 1 represents the award nominees prior to the Excellence Award being decided. Figure 2 represents the results after the Excellence Award has been decided.

Team A has been selected to win the Excellence Award. Team A was also the top candidate for the Design Award. Therefore, the next team in the Design Award ranking (Team B) will now win the Design Award and not the Innovate Award because the Design Award is of higher precedence in the Qualifying Criteria. Team D will become the Innovate Award winner. Team C, formally third place for the Think Award, is now the Think Award winner since Teams A and B are earning awards of higher precedence. In the case of the Judges Award (Team E), that award winner is unchanged.

Excellence Award (Required Award)

Design Award (Required Award)	Innovate Award	Think Award	Judges Award (Required Award)
1. Team A	1. Team B	1. Team A	1. Team E
2. Team B	2. Team D	2. Team B	2. Team X
3. Team C	3. Team E	3. Team C	3. Team Z
4. Team X	4. Team Z	4. Team X	4. Team D
5. Team Z	5. Team C	5. Team Z	5. Team Y

Figure 1: Prior to Excellence Award Determination

Excellence Award (Required Award)
Team A

Design Award (Required Award)	Innovate Award	Think Award	Judges Award (Required Award)
~~1. Team A~~	~~1. Team B~~	~~1. Team A~~	1. Team E
2. Team B	2. Team D	~~2. Team B~~	2. Team X
3. Team C	3. Team E	3. Team C	3. Team Z
4. Team X	4. Team Z	4. Team X	4. Team D
5. Team Z	5. Team C	5. Team Z	5. Team Y

Figure 2: After Excellence Award Determination

STEP 4 – ENTERING OF AWARD WINNERS INTO TOURNAMENT MANAGER

After award nominees have been finalized, the Judge Advisor should inform the Event Partner that the process is finished, and the Tournament Manager (TM) operator puts those team numbers into Tournament Manager under the “Awards” tab. It is recommended that the TM operator print the Award Summary Sheet or Award Script Reports, so the Judge Advisor can double check that all award winners have been entered correctly.

Prior to the award ceremony, the judge room should be secured, including the collection of all notes, rubrics, ranking sheets, and erasing any whiteboard notes. Judges should not retain copies of any notes referencing individual teams, including rubrics or award ranking sheets. If pictures of teams or robots were taken, Judges should delete them.

After the event is over, the Judge Advisor should destroy all collected judging materials off-site. These items are **not** to be given to the Event Partner for destruction.

Section 8: Remote Judging

Overview

Determining the judging format (In-person or Remote) that an event will offer requires a conversation between the Judge Advisor and Event Partner. Ultimately the decision on the judging format falls to the Event Partner, but the Judge Advisor should be comfortable with working in the chosen format. Remote judging can help manage volunteer resources available for the event day, but judge volunteers need to be comfortable with any additional time and/or technology requirements that may be required of them.

All teams being judged for an event should be **judged in the same format** to ensure consistency in the judging experience, and to remove the potential of format-based bias from impacting deliberations. For example, if Engineering Notebooks are being submitted for evaluation via links to digital notebooks ahead of the event for some teams, then physical notebooks should not be evaluated in-person the day of the event for other teams.

Remote judging follows all of the guidelines of in-person judging. This section is to highlight the key differences in the judging process if some of the judging tasks usually done in person are conducted remotely. Remote judging can occur in the form of Remote Digital Engineering Notebook Judging, or Remote Initial Judged Team Interviews, or a combination of both, as follows:

Remote Digital Engineering Notebook Judging

- Digital Engineering Notebooks are judged remotely before the event.
- Teams will upload links to their engineering notebook documents via RobotEvents.com.
- This list of links will be given by the Event Partner to the Judge Advisor
- Digital Notebooks should be freely viewable by the judges by using the link. Teams should ensure that permissions to view their notebooks are set to allow the judges to view.
- The Judge Advisor will organize Judges into groups to review and score notebooks using Engineering Notebook Rubrics
- Digital Engineering Notebooks should be handled remotely under similar circumstances to ensure consistency.
- Digital Engineering Notebooks should be looked at by multiple Judges to establish a ranking of finalist notebooks.
- Some events may want to conduct a variation on this evaluation format. The overriding principle remains that all notebook submissions are to be **evaluated utilizing the same submission format and in the same timeframe,** so that no entries are given any real or perceived preference or advantage.

Note: It is not permissible for teams to be asked to submit notebooks via a method other than the RobotEvents link, or as specific file type. Nor are additional requirements to be imposed on notebooks that do not appear in this guide.

Note: Once a Digital Engineering Notebook (DEN) link is uploaded via Robotevents, there is no prohibition from teams updating their DEN on an ongoing basis, even on event day. Notebook content is expected to change over time which is part of the Engineering Design Process.

Remote Initial Judged Team Interviews

- Initial Team interviews are done remotely before the event, using the Team Interview Rubric and Initial Award Candidate Ranking Sheet
- Team participants can log into the meeting from a single location sharing a webcam, or from multiple locations.
- The goal of Initial Remote Judged Team Interviews is to complete Step 1 of the Deliberation Process
- Judge Advisors should set up a way for judging notes to be collated to assist in final deliberations.
- Follow-up interviews for final award nominees (Step 2 in the Deliberation process) must be done In-Person to account for team and robot observations at the event.
- In-Person Judges of these follow-up interviews should not move teams from one award category to another. Doing so would invalidate the initial deliberations of the Remote Judges and effectively be “starting over” the judging process without giving equal treatment to all teams.

Note: Remote judging does not take the place of in-person follow up interviews and deliberations on the day of the event – it is meant to provide flexibility for Event Partners and judging volunteers to perform some judging tasks ahead of the event day. Remote judging can allow a smaller group of Judges to take advantage of the longer time frame by scheduling judging ahead of the event, and also allows for the utilization of Judge volunteers that may not be able to attend an event in person.

Remote Judging Protocols

- All Judging Principles and Guidelines still apply.
- Youth Protection must be upheld – While conducting remote interviews, each participating team should have one adult representative (18+ and not a high school student) logged in, and visible on camera during the entirety of the interview. This adult representative should join the interview before any students arrive. The adult may be in the same room as the students, or logged in separately to the remote call. This adult is not to participate in, or contribute to, the content of the team interview in any way. Their presence ensures there are multiple adult parties involved in any video meeting.
- A Judge should never be alone in a remote interview with a team, but instead, should work as part of a group of two or more Judges. With the inclusion of the team adult, this puts the minimum number of adults in a remote interview at three.
- Just as in-person interviews do not allow recording, remote interviews should also never be recorded by any party.

It is acceptable for Remote Judges to hold separate online deliberation meetings or to share spreadsheets to assist in collating judging information such as Team Interview or Engineering Notebook Rubric scores and Initial Award Candidate Ranking Sheets. Any meeting notes or data spreadsheets should be under the control of the Judge Advisor and the information contained in them destroyed at the conclusion of the event.

Remote Judging Scheduling

DIGITAL ENGINEERING NOTEBOOKS

Digital Engineering Notebook links are uploaded by the Primary Team Contact in their Robotevents.com account. The Event Partner and the Judge Advisor should determine a deadline by which all teams must have their links uploaded, thus giving the Judges adequate time to begin reviewing the Digital Engineering Notebooks. The Event Partner will share that list of links with the Judge Advisor, who will assign Judges to review each Digital Engineering Notebook according to the Engineering Notebook evaluation process (see Section 5). All Digital Engineering Notebooks should be evaluated under similar conditions and time constraints.

Scheduling the Remote Judging Volunteers – Interview scheduling requires coordination between the Event Partner and Judge Advisor, Remote Judges, and the teams. It is recommended to first create a schedule of interview times, then ensure that Remote Judges and the Judge Advisor are available for those times. While the Judge Advisor may not need to participate in an interview, it is highly recommended that they be on hand to help manage any issues that may arise. Additionally, if a Remote Judge ends up not being able to attend or has a technology issue, the Judge Advisor can step in and serve as a Remote Judge so teams can be interviewed at their scheduled time.

Scheduling the Teams – Remote Initial Team Interview sign-up times can be manually scheduled by the Event Partner, or an easier method may be for teams to schedule themselves via a first-come, first-served sign-up system. It is recommended that remote interviews be completed a few days ahead of the event in case extra time is needed due to a volunteer or technology issue disrupting the schedule.

If there are enough Remote Judge volunteers to support it, multiple interviews can be conducted in parallel. For example, using a single remote judging link with a main room for incoming teams and breakout rooms for each team of Remote Judges. Teams are then moved from the main room into a breakout room for their interview. It may be helpful to have two adults (the Judge Advisor and another event staff member) greet teams in the main room as they arrive, ensure they have their adult representative visible on camera, and ensure it is the correct team for the time slot, before moving teams in to see their Remote Judges. Having this “waiting room” also prevents teams from inadvertently interrupting another team’s interview.

Note: Past experience has shown that half-hour interview cycle times work well. Thirty-minutes allows ample time for teams to enter the remote judging environment, for Remote Judges to conduct a 10–15-minute interview, and for Remote Judges to have time to discuss, score the interview, and fill out the Initial Award Candidate Ranking Sheet, before the next team arrives.

Initial Award Candidate Ranking Sheet

Judge Name/Judge Group: _____

Check the boxes below for which awards you think a team would be a strong candidate. All Judge groups will cross-reference their lists to create a final award nomination list. The Design and Judges Awards are pre-filled here since they are required awards. The blank columns should indicate any additional awards given at the event**.** The empty cell below each award name can be filled in with the award descriptions. Use multiple checkmarks to help sort recommendations.

TEAM NUMBER	**Design Award**						**Judges Award**
	Communicating the Engineering Design Process						**Special Recognition**

All Judging materials are strictly confidential. They are not shared beyond the Judges/Judge Advisor and shall be destroyed at the end of the event.

Final Award Nominee Ranking Sheet

This form is a tool for the Judge Advisor to record the ranked candidates for each award. The blank columns will indicate any additional awards given at the event. A team can appear in multiple award categories. Excellence Award candidates are developed by taking into account Engineering Notebook scores, the Team Interview scores, and on-field performance rankings. If more rankings are needed beyond the five fields provided below, or if there are additional awards being judged, a second sheet should be used.

It is important that there be multiple ranked candidates for each award. The selection of the Excellence Award winner may cause other award winners to change, as teams can only earn one judged award at an event.

Excellence Award (Required Award)

Design Award (Required Award)						**Judges Award** (Required Award)
1.	1.	1.	1.	1.	1.	1.
2.	2.	2.	2.	2.	2.	2.
3.	3.	3.	3.	3.	3.	3.
4.	4.	4.	4.	4.	4.	4.
5.	5.	5.	5.	5.	5.	5.

All Judging materials are strictly confidential. They are not shared beyond the Judges/Judge Advisor and shall be destroyed at the end of the event.

Engineering Notebook Rubric

Team # _____ **Grade Level ☐ ES | ☐ MS | ☐ HS | ☐ VEX U** **Judge Name:** _____

Directions: Determine the point value that best characterizes the content of the Engineering Notebook for that criterion. Write that value in the column to the right. This rubric is to be used for all Engineering Notebooks regardless of format (physical or digital).

CRITERIA	PROFICIENCY LEVEL			
ENGINEERING DESIGN PROCESS	**EXPERT** (4-5 POINTS)	**PROFICIENT** (2-3 POINTS)	**EMERGING** (0-1 POINTS)	**POINTS**
IDENTIFY THE PROBLEM	Identifies the game and robot design challenges in detail at the start of each design process cycle with words and pictures. States the goals for accomplishing the challenge.	Identifies the challenge at the start of each design cycle. Lacking details in words, pictures, or goals.	Does not identify the challenge at the start of each design cycle.	
BRAINSTORM, DIAGRAM, OR PROTOTYPE SOLUTIONS	Lists three or more possible solutions to the challenge with labeled diagrams. Citations provided for ideas that came from outside sources such as online videos or other teams.	Lists one or two possible solutions to the challenge. Citations provided for ideas that came from outside sources.	Does not list any solutions to the challenge.	
SELECT BEST SOLUTION AND PLAN	Explains why the solution was selected through testing and/or a decision matrix. Fully describes the plan to implement the solution.	Explains why the solution was selected. Mentions the plan.	Does not explain any plan or why the solution or plan was selected.	
BUILD AND PROGRAM THE SOLUTION	Records the steps to build and program the solution. Includes enough detail that the reader can follow the logic used by the team to develop their robot design, as well as recreate the robot design from the documentation.	Records the key steps to build and program the solution. Lacks sufficient detail for the reader to follow the design process.	Does not record the key steps to build and program the solution.	
TEST SOLUTION	Records all the steps to test the solution, including test results.	Records the key steps to test the solution.	Does not record steps to test the solution.	
REPEAT DESIGN PROCESS	Shows that the design process is repeated multiple times to improve performance on a design goal, or robot/game performance.	Design process is not often repeated for design goals or robot/game performance.	Does not show that the design process is repeated.	
Innovation/ Originality	Team shows evidence of independent inquiry from the beginning stages of their design process	Teams show evidence of independent inquiry for some elements of their design process	Teams do not show evidence of independent inquiry / their design process	
USEABILITY AND COMPLETENESS	Records the entire design and development process in such clarity and detail that the reader could recreate the project's history.	Records the design and development process completely but lacks sufficient detail	Lacks sufficient detail to understand the design process.	
RECORD OF TEAM AND PROJECT MANAGEMENT	Provides a complete record of team and project assignments; team meeting notes including goals, decisions, and building/programming accomplishments; Design cycles are easily identified. Resource constraints including time and materials are noted throughout.	Records most of the information listed at the left. Level of detail is inconsistent, or some aspects are missing.	Does not record most of the information listed at the left. Not organized.	
NOTEBOOK FORMAT	Five (5) points if the notebook has evidence that documentation was done in sequence with the design process. This can take the form of dated entries with the names of contributing students included and an overall system of organization. For example, numbered pages and a table of contents with entries organized for future reference.		ZERO POINTS (DOES NOT MEET CRITERIA) If awarding zero points, please include details in the "NOTES" area below.	
NOTES:				**TOTAL POINTS**

All Judging materials are strictly confidential. They are not shared beyond the Judges/Judge Advisor and shall be destroyed at the end of the event.

Team Interview Rubric

Team # _____ **Grade Level ☐ ES | ☐ MS | ☐ HS | ☐ VEX U** **Judge Name:** _____

Directions: Determine a point value that best characterizes the content of the Team Interview for that criterion. Write that value in the column to the right.

CRITERIA	PROFICIENCY LEVEL **EXPERT** (4-5 POINTS)	**PROFICIENT** (2-3 POINTS)	**EMERGING** (0-1 POINTS)	**POINTS**
ENGINEERING DESIGN PROCESS *All Awards*	Students clearly explain all aspects of the design process	Students can explain most aspects of the design process	Students can explain only limited aspects of the design process	
GAME STRATEGIES *Design, Innovate, Create*	Students can fully explain their entire game strategy including game analysis	Students can explain their current strategy with limited evidence of game analysis	Students did not explain game strategy/strategy is not student-directed	
ROBOT DESIGN *Design, Innovate, Create, Amaze*	Students can fully explain the evolution of their robot design to the current design	Students can provide a limited description of why the current robot design was chosen, but shows limited evolution	Students did not explain robot design /design is not student-directed	
ROBOT BUILD *Build, Create, Amaze*	Students can fully explain their robot construction. Ownership of the robot build is evident	Students can describe why the current robot design was chosen, but with limited explanation	Students did not explain robot build/build is not student-directed	
ROBOT PROGRAMMING *Think, Amaze*	Students can fully explain the evolution of their programming	Students can describe how the current programs work, but with limited evolution	Students did not explain programming/programming is not student-directed	
TEAM AND PROJECT MANAGEMENT *All Awards*	Students can explain how team progress was tracked against an overall project timeline, students can explain management of material and personnel resources.	Students can explain how team progress was monitored, and some degree of management of material and personnel resources	Students cannot explain how team progress was monitored or how resources were managed.	
TEAMWORK, COMMUNICATION, PROFESSIONALISM *All Awards*	Students can explain how multiple team members contributed to the robot design and game strategy. All students answer questions independently.	Students can explain how some team members contributed to the robot design and game strategy. Some students answer questions independently.	Only one team member answered questions or contributed to the robot design process.	
RESPECT, COURTESY, POSITIVITY *All Awards*	Students answer respectfully and courteously. Students make sure each team member contributes. Students wait to speak until others have finished.	Students answer respectfully and courteously. Some students attempt to contribute but are interrupted by other students.	Students do not answer respectfully and courteously. Students interrupt each other or the Judges.	
SPECIAL ATTRIBUTES *Judges, Inspire*	Does the team have any special attributes, accomplishments, or exemplary effort in overcoming challenges at this event? Please describe:			**TOTAL POINTS**

NOTES:

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Team Interview Notes

Directions: Use this sheet to take notes during each team interview. As a Judge group, ask open ended questions to teams that give insight into each of the criteria below.

Team Number: _____ **Judge Name:**_____

CRITERIA	CRITERIA EXPLANATION	JUDGE'S NOTES
ENGINEERING DESIGN PROCESS *All Awards*	How well does the team explain the process they used to create their robot design?	
GAME STRATEGIES *Design, Innovate, Create*	Can the students explain their game strategy, how they came up with it, & how well it fits with their robot design?	
ROBOT DESIGN *Design, Innovate, Create*	Do students demonstrate ownership of the design process? Is the robot well designed to accomplish their goals?	
ROBOT BUILD *Build, Create*	Do students demonstrate ownership of the build process? Is the robot well-built and robust?	
ROBOT PROGRAMMING *Think*	Do students demonstrate ownership of the robot's programming? How well can they explain their code?	
TEAM & PROJECT MANAGEMENT *All Awards*	Can students explain how they managed their time, resources, and people to work effectively?	
TEAMWORK, COMMUNICATION, PROFESSIONALISM *All Awards*	Do all team members share in the work of being a successful team? Does everyone contribute in some way?	
RESPECT, COURTESY, POSITIVITY *All Awards*	Students answer respectfully and courteously. Students make sure each team member contributes. Students wait to speak until others have finished.	
SPECIAL ATTRIBUTES *Judges, Inspire*	Does the team have any special attributes or accomplishments?	

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Excellence Award Criteria Checklist

Please review the Excellence Award criteria in full. This checklist is a summary of the overall Excellence Award description. Teams must satisfy all requirements in order to be eligible for the Excellence Award. Teams that have not run skills are given a score of zero for ranking purposes. For events with a single Excellence Award, percentages are based on the number of teams at the event. For blended grade level events with two grade specific Excellence Awards, percentages should be based on the teams in each the grade level for each award.

- ☐ Team has exhibited a high-quality team interview and scored well on the Team Interview Rubric
- ☐ Team is in the top 30% of overall Skills Rankings based on the total number of teams at the event.
- ☐ Team is the top 30% of Autonomous Coding Skills Rankings
- ☐ Team is in the top 30% of Qualification Rankings based on the total number of teams at the event.
- ☐ Team has submitted a notebook that is ranked at or near the top of engineering notebook rankings, and is a strong candidate for the Design Award.
- ☐ Team has been nominated or ranked for multiple other judged awards at the event.
- ☐ Team exhibits positive team conduct, good sportsmanship, and professionalism.

Judge Volunteer Check-in Sheet

Directions: Use this sheet to check in Judge volunteers. Record each Judge's name, email (for follow up contact), cell phone number (to reach Judges during the event), and team affiliation (to avoid potential conflicts of interest). Print additional sheets for larger events.

NAME	EMAIL *Please provide your email for follow-up contact*	PHONE *Please provide a number where you can be reached during this event*	TEAM AFFILIATION *Indicate any team with which you may have an affiliation*

Judges' Note to Missed Teams

Dear Team Number _____,

The Judges have come by to interview your team. We are sorry we missed you and will make another attempt to interview you at a later time.

We were here at:

Date: _____ **Time:** _____

Judges' Note to Missed Teams

Dear Team Number _____,

The Judges have come by to interview your team. We are sorry we missed you and will make another attempt to interview you at a later time.

We were here at:

Date: _____ **Time:** _____

Volunteer Field Note to Judges

Match #	
Team Number	
Team Name	
Organization Name	

THIS NOTE IS FROM:	**Name:** _____ **Volunteer Position:** _____
Check one below:	Please provide either positive or negative feedback about a specific team for the Judges to consider in their deliberations for awards. This form should be filled out in its entirety and signed by the Head Referee or Division Manager, or the Event Partner at the bottom of the sheet. Including details in your notes is helpful for Judges' consideration.
☐ **POSITIVE**	
☐ **NEGATIVE**	

Head Referee/Division Manager/Event Partner Print and sign full name:_____	**Date:** _____ **Time:** _____

Judging Single-Page Reference Sheet

Superscript numbers next to award names indicate precedence for event qualifications. For Full Award Descriptions, please refer to the **Guide to Judging.**

[2] DESIGN AWARD

- Be at or near the top of Engineering Notebook Rubric rankings.
- Exhibit a high-quality team interview.
- Team demonstrates effective management of time, talent, and resources.
- Team interview demonstrates their ability to explain their robot design and game strategy.

[1] EXCELLENCE AWARD

- All **Design Award** criteria, plus:
- Be ranked in the top 10 or top 30% of teams in Qualification Rankings
- Be ranked in the top 5 or top 20% of teams in Robot Skills Rankings.
- Be a candidate in consideration for other Judged Awards

JUDGES AWARD

- Earned by a team that distinguishes themselves in some way that may not fit in other award categories.
- Team displays special attributes, exemplary effort, and perseverance at the event.
- Team overcomes an obstacle or challenge and achieves a goal or special accomplishment

[3] INNOVATE AWARD

Recognizes an effective and well documented design process.

The team who earns the Innovate Award should be among the top contenders for the Design Award.

The submission of an Engineering Notebook is a requirement for the Innovate Award.

[4] THINK AWARD

Recognizes the most effective and consistent use of coding techniques and programming design solutions to solve the game challenge.

[5] AMAZE AWARD

Recognizes a consistently high-performing and competitive robot.

[6] BUILD AWARD

Recognizes a well-constructed robot that is constructed with high attention to detail to hold up to the rigors of competition.

[7] CREATE AWARD

Recognizes a creative engineering design solution to one or more of the challenges of the competition.

ENERGY AWARD

Recognizes outstanding enthusiasm and excitement at the event.

INSPIRE AWARD

Recognizes passion for the competition and positivity at the event.

SPORTSMANSHIP AWARD

Recognizes a high degree of good sportsmanship, helpfulness, and positive attitude both on and off the competition field.

INTERVIEW CHECKLIST

- □ Record team number on Interview Notes
- □ Keep track of time -spend equal time with every team
- □ Take notes on each team
- □ Be mindful of your environment. Do not leave notes unattended or discuss teams where others could hear.
- □ Wish team success and thank them for the interview.
- □ Away from the team, briefly discuss interview with Judge group & fill out the Team Interview Notes sheet

INTERVIEW TIPS

- □ Ask teams if they have an upcoming match before you start your interview – if yes, interview them later
- □ Ask if all team members are present before starting the interview
- □ Take picture of robot, be sure team number is shown (Optional)
- □ Mark pit sign or team list to show a completed interview
- □ If you have trouble finding a team, check the match schedule and find them as they leave a match

Team Interview Tips and Sample Questions

Best Practices

- Ask if the team has a few minutes for the interview. If the team has an upcoming match that may interfere with the interview, tell them you will come back at a better time. **Do not** keep the students from heading to a match and make them late for their competition round.
- Ask if all team members are present. Try to include all team members in the interview.
- Ask a quick “icebreaker” question such as, “That’s a really great team logo! Who designed it?” or “How is your team doing so far today?”
- Being a Judge gives you a unique opportunity to impact students through positive reinforcement. Just a few words of encouragement can make their day.
- Try not to ask yes or no questions. Encourage teams to elaborate on their answers.
- Be prepared to rephrase your questions. Be mindful of differences in communication styles.
- Be mindful of students who do not speak the language that you are using as their first language.
- Be aware of different age levels. Approach students in an age-appropriate way, especially when talking to younger students.
- Be attentive to students. Do not engage in side conversations/phone use during interviews.
- It is acceptable to take a picture of each team with their robot so the license plate is visible. This will help you identify teams and robots later during deliberations.
- If you are having trouble finding a team, wait for them at the field for their next match.

Sample Questions

- Is this a good time for an interview? Are all of your team members here?
- What does your robot do and how does it score points?
- How did you develop this robot design?
- Which team members built the robot?
- What part of your robot are you most proud of? Why?
- Were there any other robots that inspired your robot design? How?
- What changes did you make to improve your design during the season?
- What was the most difficult challenge your team has overcome so far?
- Did you use any sensors? What are they used for? How do they operate in your autonomous mode? How do they operate in your driver-controlled mode?
- What problems did you have in working on your robot? How did your team solve them?
- If you had one more week to work on your robot, how would you improve it?
- Has your game strategy been effective? How and why?
- Tell us about your robot’s programming – who was the primary programmer?
- What were the challenges of this year’s game that you considered before designing your robot? How did you design your robot to meet those challenges?
- What are your goals for Driver and Autonomous Coding Skills scores? What are your average scores?

Award Descriptions for Judges Room

The following pages contain award descriptions and list key criteria for each award and are useful in guiding the Judges' deliberations.

Event Partners/Judge Advisors may wish to print these descriptions and then laminate them or place them in plastic sheet protectors for use at multiple events.

Not all events will give out all awards. Each Judge Advisor should consult with their Event Partner to determine which awards will be presented at an event.

EXCELLENCE AWARD

KEY CRITERIA

- Be at or near the top of all Engineering Notebook rankings.
- Exhibit a high-quality team interview.
- Be a candidate in consideration for other Judged Awards.
- Demonstrate a student-centered ethos.
- Exhibit positive team conduct, good sportsmanship, and professionalism.
- Be ranked in the top 30% of qualification rankings at the conclusion of qualifying matches.
- Be ranked in the top 30% of teams at the conclusion of the Robot Skills Challenge matches.
- Be ranked in the top 30% of Autonomous Coding Challenge scores at the conclusion of the Robot Skills Challenge.

DESIGN AWARD

KEY CRITERIA

- Engineering Notebook demonstrates clear, complete, and organized record of an iterative Engineering Design Process
- Team demonstrates effective management of time, talent, and resources.
- Team interview demonstrates their ability to explain their robot design and game strategy.
- Be at or near the top of Engineering Notebook Rubric rankings.
- Exhibit a high-quality team interview.
- Team interview demonstrates effective communication skills, teamwork, and professionalism.
- Engineering Notebook and Team Interview demonstrate a student-centered ethos

JUDGES AWARD

KEY CRITERIA

- Team distinguishes themselves in some way at the event that may not fit in other award categories.
- Exhibit a high-quality team interview.
- Team displays special attributes, exemplary effort, and perseverance at the event.
- Team overcomes an obstacle or challenge and achieves a goal or special accomplishment.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

INNOVATE AWARD

KEY CRITERIA

- Teams identify in their notebook a specific section or specific pages covering the origin and development of a design element, strategy, or other attribute that is a key part of their team's robot design or gameplay.
- This design element, strategy, or other attribute is unique or uncommon among teams at the event.
- This design element, strategy or other attribute is well-documented from initial conception through execution.
- Engineering Notebook demonstrates a clear, complete, and organized record of robot design process.
- Team demonstrates effective management of time, talent, and resources.
- Team interview demonstrates their ability to explain their robot design and game strategy.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

THINK AWARD

KEY CRITERIA

- Participation in the Autonomous Coding Skills Challenge
- Autonomous programming is consistent and reliable.
- Programs are cleanly written, well annotated and documented.
- Exhibit a high-quality team interview.
- Team clearly explains the programming strategy used to solve the game challenge.
- Team clearly explains their programming management process, including version history.
- Students understand and explain how they worked together to develop their robot programming.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

AMAZE AWARD

KEY CRITERIA

- Robot consistently contributes to high scoring matches with their alliance partner.
- Robot performs at a high level in Driving Skills and Autonomous Coding Skills at the event.
- Robot is designed and constructed to consistently execute an effective game strategy.
- Robot programming is effective, and consistently successful.
- Students understand and explain how they worked together to develop their robot design.
- Exhibit a high-quality team interview.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

BUILD AWARD

KEY CRITERIA

- Robot construction is durable and robust.
- Robot is reliable on the field and holds up under competition conditions.
- Robot is designed with attention to safety and detail.
- Students understand and explain how they worked together to develop their robot design.
- Exhibit a high-quality team interview.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

CREATE AWARD

KEY CRITERIA

- Team demonstrates a creative approach to accomplish game objectives.
- Team has committed to ambitious and creative approaches to solving the game challenge.
- Students understand and explain how they worked together to develop their robot design and game strategy.
- Exhibit a high-quality team interview.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

SPORTSMANSHIP AWARD

KEY CRITERIA

- Team is courteous, helpful, and respectful to everyone at the event, on and off the field.
- Team interacts with others in the spirit of friendly competition and cooperation.
- Team acts with honesty and integrity, enriching the event experience for all.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

ENERGY AWARD

KEY CRITERIA

- Team maintains a high level of enthusiasm and excitement throughout the event.
- Team exhibits a passion for the robotics competition that enriches the event experience for all.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos

INSPIRE AWARD

KEY CRITERIA

- Team exhibits passion and a positive attitude at the event.
- Team exhibits integrity, and goodwill toward other teams, coaches, and spectators.
- Team overcomes an obstacle or challenge and achieves a goal or special accomplishment at the event.
- Team interview demonstrates effective communication skills, teamwork, professionalism, and a student-centered ethos