



Awards Appendix E



Awards Overview

This section details the full list of awards presented in the VEX U Robotics Competition. Most local and regional tournaments will offer a small subset of these awards, based on the number of teams at their event. The only event likely to present each of these awards will be VEX Worlds, as warranted by the numbers of teams competing. The awards presented at each event are chosen by the event planning committee with the help of their Regional Support Manager. Details on the judging process used to select award winners are available in the Judge Guide located at roboticseducation.org/event-partners/event-partner-resources-documents/.

The standard set of awards will be offered at most tournaments.

| Standard Set of Awards | |
|-----------------------------|--|
| Excellence Award | Top All Around Team (Robot Performance & Judged) |
| Tournament Champion Award | Team that wins the tournament (Robot Performance) |
| Design Award | Team with a professional design approach |
| Robot Skills Champion Award | Top Combined Programming & Driving Skills Challenge Team (Robot Performance) |
| Judges Award | Recognition from Judges for special accomplishments |
| Volunteer of the Year Award | Recognized Event Volunteer |

In addition to these standard awards, larger events may also offer some or all of the following awards:

| Other Awards (Larger Events) | |
|------------------------------|---|
| Tournament Finalist Award | Team comes in 2 nd at a tournament (Robot Performance) |
| Amaze Award | Team with an amazing, well rounded and top performing robot |
| Build Award | Team with a well-crafted robot |
| Create Award | Robot with a creative engineering solution |
| Innovate Award | Team that has the most "Innovative" design feature on their robot |
| Think Award | Team with an impressive and effective autonomous programming |

The remaining awards may be offered at very large events, such as VEX Worlds. For a listing of the awards offered at your event and of the awards that qualify for advancement to championship events, please visit your event page at robotevents.com.

| Other Awards (Very Large Events) | |
|------------------------------------|--|
| Robot Skills 2 nd Place | 2 nd place combined Programming & Driving Skills Challenge Team (Robot Performance) |
| Robot Skills 3 rd Place | 3 rd place combined Programming & Driving Skills Challenge Team (Robot Performance) |
| Community Award | Team with extraordinary community involvement and awareness |
| Sportsmanship Award | Team that is extremely courteous and most enthusiastic |

The following Awards are part of the online challenge program.

| Online Challenge Awards (These Awards are submitted in January) | |
|---|--|
| VEX Promote Award | Team with the best Online Challenge video submission |
| VEX Photo Challenge | Team with the best Photo submission |
| Texas Instruments Electronics Challenge | Team with the best electronics study |
| Dell Technologies Website Challenge | Team with the best Website submission |
| REC Foundation STEM Educational Video | Team with the best Educational video submission |
| Autodesk Make it real CAD Challenge | Team with the best Cad & 3-D printing submission |
| FUTURE Foundation Robot Construction Challenge | Team with the best design meeting the year's challenge |

Team Professionalism and Ethics

The REC Foundation considers positive, respectful, and ethical conduct to be an important and essential component of the VEX Robotics Competition. Ethics is an important part of every engineer's professional training and practice. Judges will consider team conduct in determining awards. Judges will consider students, mentors, and adults to be team members.

Excellence Award

The **Excellence Award** is the highest award presented in the VEX U Competition. This award is presented to a team that exemplifies overall excellence in creating a high quality VEX U program. This team is a strong contender in numerous award categories. Excellence winners must have an engineering notebook.

Key criteria:

- Design Award ranking
- Tournament Qualification Matches ranking
- Robot Skills Challenge ranking
- Other Judged Award rankings
- High quality VEX U robotics program

Excellence Award at VEX Worlds

At VEX Worlds, Excellence Awards will be offered to one VEX U team at the event. Schools or organizations that won the Excellence Award in the previous three years will not be eligible for the Excellence Award at VEX Worlds.

Each VEX U team at Worlds will be eligible for consideration for Excellence. Judges will determine the winner by considering the criteria listed above.

Design Award

The **Design Award** is presented to a team that demonstrates an organized and professional approach to the design process, project and time management and team organization. Only teams that submit Engineering Notebooks are eligible for the Design Award.

Key criteria:

- Engineering Notebook is a clear, complete document of the team's design process
- Team is able to explain their design and strategy throughout the season
- Team demonstrates personnel, time and resource management through the season
- Teamwork, interview quality, and team professionalism.

Design Award Rubric

Judges will use the Design Award Rubric to evaluate the teams' performance on the award criteria. The first page of the Design Award Rubric is used to evaluate the quality of a team's Engineering Notebook. The second page of the rubric is then used to evaluate the students' understanding and application of an effective robot design process, as demonstrated in their team pit interview with Judges. The Design Award Rubric is available in the Judge Guide and at roboticseducation.org/event-partners/event-partner-resources-documents/.

Design Award – Engineering Notebook

One of the primary missions of the VEX U Competition is to help students acquire real world life skills that will benefit them in their academic and professional future. The Engineering Notebook is a way for teams to document how the VEX U Competition experience has helped them to better understand the engineering design process while also practicing a variety of critical life skills including project management, time management, brainstorming, and teamwork.

Each notebook is created through a concerted effort by a team to document their design decisions. Engineering is an iterative process whereby students recognize and define a problem, brainstorm and work through various stages of the design process, test their designs, continue to improve their designs, and continue the process until a solution has been identified. During this process, students will come across obstacles, encounter instances of success and failure, and learn many lessons. It is this iterative process that students should document in their Engineering Notebook.

The Engineering Notebook provides an opportunity to document everything a team does during the design process. Students should include a number of items in their Engineering Notebook including: a table of contents, team meeting notes as they relate to the design process, design concepts and sketches, pictures, notes from competitions regarding observations that should be considered in the next iteration of their design, team members' observations and thoughts on their design, team organization practices as they relate to their design process, and any other documentation that a team finds useful as related to their robots design. The team should also document their project management practices including their use of personnel, financial, and time resources.

A good notebook would allow a person who is unfamiliar with the team's work to take over the robot design/construction based on a team's detailed design documentation. The Engineering Notebook provided by the REC Foundation with team registrations includes hints on good notebook practices and gives examples of good practices. A bound quad-ruled notebook is the preferred format. You may use the notebook provided by VEX or purchase your own bound notebook from any one of many online sources. The notebook should never be edited. The team number should be on the cover. The notebook should be written in ink with errors crossed out using a single line. Pages should be numbered and entries should be dated in chronological order with each page signed or initialed by the students. Additional materials such as computer code or CAD drawings should be glued or taped into the notebook. Pages should never be removed from the Notebook even if they contain errors.

Note to Teams: Judges will not accept Electronic notebooks on lap tops, thumb drives, or cloud based servers. The Design Rubric may be found in the Judges guide which is posted on the RoboticsEducation.org website. Teams will be interviewed in their pit area during local and state competitions.

Design Award at VEX Worlds

Teams will submit their Engineering Notebooks at check in. Teams with high quality Engineering Notebooks will be selected for Design Award interviews in the Team Pit Areas. Teams are not given scheduled sit down interviews for the Design Award at VEX Worlds.

Judges Award

The Judges Award is presented to a team that the Judges determine is deserving of special recognition. Judges consider several possible criteria for this award, such as team displays of special attributes, exemplary effort and perseverance at the event, or team accomplishments or endeavors throughout the season that may not fit under existing awards, but are nonetheless deserving of special recognition.

Robot Performance Awards

The **Tournament Champions Award** is presented to the winning team of the VEX U tournament.

The **Robot Skills Champion Award** is presented to the team with the highest combined Programming and Driving Skills Challenge score. A team's combined score will be determined by adding their highest Programming Skills score and their highest Driving Skills score at a single competition. Teams competing in only one of the two skills challenges will receive a zero score in the challenge in which they did not participate.

The **Tournament Finalists Award** is presented to the runner-up team of the VEX U tournament. Some, but not all, events may choose to present this award.

The **Robot Skills 2nd Place Award** is presented to the team with the second highest combined Programming and Driving Skills Challenge score. Some, but not all, events may choose to present this award.

The **Robot Skills 3rd Place Award** is presented to the team with the third highest combined Programming and Driving Skills Challenge score. Typically, only VEX Worlds will offer this award.

Technical Judged Awards

These awards and most of the Other Team Judged Awards are Judged using the VEX U Awards Scoring Sheet, which is available at roboticseducation.org/competition-teams/vex-robotics-competition/.

The **Amaze Award** is presented to a team that has built a competition robot that clearly demonstrates overall quality. A solid mechanical design along with demonstrated robot programming, robustness, strong performance and consistency are key attributes assessed for this award.

Key criteria:

- Robot design is consistently high-scoring and competitive
- Robot demonstrates a solid mechanical design and is robustly constructed to fulfill its designed task
- Robot autonomous mode is consistently successful
- Robot is robustly constructed to fulfill its designed task
- Teamwork, interview quality, and team professionalism

The **Build Award** is given to a team that has built a well-crafted and constructed robot that also shows a clear dedication to safety and attention to detail.

Key criteria:

- Robot construction is of professional quality; robust, clean and elegant use of materials
- Robot efficiently uses mechanical and electrical components
- Robot is designed with a clear dedication to safety and attention to detail
- Robot demonstrates reliability on the field and holds up under competition conditions
- Teamwork, interview quality, and team professionalism.

The **Create Award** is presented to a team whose robot design incorporates a creative engineering solution to the design challenges of this season's game.

Key criteria:

- Robot is a well-crafted, unique design solution, demonstrating creative thinking
- Team has demonstrated a highly creative design process and methodology
- Team has committed to ambitious and creative approaches to playing the game
- Teamwork, interview quality, and team professionalism

The **Think Award** is presented to a team that has developed and effectively used quality programs as part of their strategy to solve the game challenge.

Key criteria:

- All programming is cleanly written, well documented, and easy to understand
- Team has explained a clear programming strategy to solve the game challenge
- Team demonstrates their programming management process, including version history
- Team's autonomous code is consistent and reliable
- Teamwork, interview quality, and team professionalism

Other Judged Team Awards

The **Community Award** is presented to a team that should be recognized for making a difference in the community. This award may be judged by the local VEX U Organizing Committee. This team demonstrates strong community building skills and has made many contributions to help support students and teams beyond their own school. This award is given to a team that makes a concerted effort to raise support in their community for technology education programs. To be considered for this award at the VEX Worlds, teams must pre-submit a 500-word essay through the VEX Worlds awards page at robotevents.com/vexawards/, which will be available from **February 1, 2018, until March 20, 2018**. Late submissions will not be accepted.

The **Innovate Award** is presented to a team that has demonstrated a strong combination of ingenuity and innovation in designing their VEX robot. This award will typically recognize a specific, unique piece of engineering that exemplifies thinking outside of the box and innovative engineering design. This robot feature should also be a part of the engineering design solution that solves the complex problems presented by the VRC game. To be considered for this award at the VEX Worlds, teams must pre-submit a 500-word essay describing your innovative robot feature plus a **60 or less second** video of their innovative robot feature in action through the VEX Worlds awards page at robotevents.com/vexawards/ will be available from **February 1, 2018, until March 20, 2018**. Late submittals will not be accepted for this award.

Key criteria:

- Robot design demonstrates an ingenious and innovative piece of engineering
- Innovative feature is soundly crafted and is an effective solution to a design problem
- Innovative solution is integrated as a part of an overall well-crafted robot
- Students understand and explain why the innovative feature was necessary
- Teamwork, interview quality, and team professionalism

The **Sportsmanship Award** is presented to a team that has earned the respect and admiration of the volunteers and other teams at the event. VEX Worlds uses ballots for this award.

Key Criteria:

- Team is courteous, helpful, and respectful to everyone at the event, on and off the field
- Team treats others on the playing field in the spirit of friendly competition and cooperation
- Team demonstrates respect and willingness to help event staff, other teams and spectators
- Team demonstrates excitement and enthusiasm throughout the event

Online Challenge Awards

The VEX online challenge rules and judging criteria are located on the Online Challenge site which is found at: <http://challenges.robotevents.com/>. Online challenge submissions are due in January.

Individual Award

The **Volunteer of the Year Award** is presented to an event volunteer who demonstrates a commitment and devotion to their community, putting in many hours of hard work with persistence and passion to help make events happen. To be considered for this award at the VEX Worlds, the volunteer must be nominated by a member of the REC Foundation staff.