



WC Judges' Handbook

Overview

Thank you for your willingness to help make the VEX Robotics Competition a success. This document will serve as a guide to assist you during your time as a VRC Judge. There are many methods used across different tournaments that are successful, so this resource exists to serve as a guide to tournament organizers, Judge Advisors and Judges.

A judging team consists of two or three judges. Each team of judges will get to know roughly one team every 10 -15 minutes through interview and observation. When judges maintain a 10-15 interview and observation schedule, we find that the judging process runs more smoothly, volunteers and teams have an easier day, and the event stays on schedule. Check with your tournament organizer to determine how your event will be scheduled.

In this document, you will find:

- Judge Advisor, Judge and Awards Coordinator position descriptions
- A detailed description of each award
- Rubrics for judging the most commonly used awards
- Awards scripts
- Award ballots for use at local and regional events

Key Terminology

The Pit Area: The area that teams use as their home base during the day is called the Pit Area. Teams are usually provided with a table for their robot, laptop, batteries and other VEX parts. The Pit is also the work area for the teams. This is a great place to meet with teams in an informal setting and see them in a more relaxed environment.

Since the competition schedule is very tight, it may be difficult to catch teams in their pit area. Also, larger teams may only have some of their team in the pit area, with the rest of the members congregating in the stands. If at first you are unable to locate a team in their pit area, feel free to leave them a note to inform them that the judges are hoping to speak with them and/or check their pit area later.

The Competition Floor: Robot matches take place on the competition floor in a 12' x 12' competition field. Rounds last 2 minutes and 20 seconds and are scored by referees. Teams typically have one practice round, and then qualification rounds, followed by the elimination rounds. The competition floor is a great place to see the teams in action and to evaluate how well their robots perform. Judges who spend time viewing the competition have the opportunity to validate statements made by teams during interviews.. Be certain to ask your Judge Advisor or tournament director if there is time allocated for this activity. In addition, you can get a great idea of a team's sportsmanship, energy and enthusiasm while observing teams on the competition field.

The Judge Advisor: The Judge Advisor is the "head judge" among the judging panel. For details on this role, please see the "Judge Advisor Responsibilities" section later in this document. If Award Rubrics are used at your event, the Judge Advisor is responsible for collecting and compiling the rubrics. Frequently, the Judge Advisor will also serve as the Awards Coordinator at local events.

Awards Coordinator: The Awards Coordinator will act as an assistant to the Judge Advisor. For details on this role, please see the "Awards Coordinator Responsibilities" section later in this document. If Award Rubrics are used at your tournament, then the Awards Coordinator may have the additional responsibility of assisting in compiling rubrics and scores. Larger events may consider having multiple Awards Coordinators to streamline the process. Most importantly, the Awards Coordinator will be responsible for collecting and distributing award scripts to ensure a timely award presentation.

Judge Advisor Responsibilities

The Judge Advisor is responsible for recruiting and training judges for the tournament. The judge advisor also works with the tournament planning committee and/or the tournament organizer to decide how judging for the event will be conducted. At most events Judges will seek out teams during the day, while some events may also schedule teams for judging interviews. Ultimately, the Judge Advisor must schedule, organize, and lead the overall judging process.

- The Judge Advisor must also:
 - Confirm judging panels
 - Assign specific teams for each judging panel to interview/observe
 - Assign awards to be evaluated
 - Ensure that plenty of judging supplies are available
 - Setup a judging room and panel of judges for the Future Award if it is being handed out
- Regarding awards, the Judge Advisor should also:
 - Act as a liaison between teams and judges when questions arise
 - Keep the judging process on schedule
 - Identify any conflicts of interest on the judging panel, and ensure that judges with a relationship with a certain team do not take part in deliberations and award determinations for that team.
 - Work with the Awards Coordinator to ensure that all ballots are collected for awards being judged by teams, volunteers and/or the local organizing committee
 - Moderate the judging panels' deliberations on final award decisions:
 - If the judging panel is unable to decide between two teams for a given award, it is up to the Judge Advisor to break the tie
 - Organize judges to visit teams additional times in order to determine award winners (when multiple judge panels were used to judge a single award or single awards category)
 - Prepare the list of award winners for the Emcee, including full award description, judges' comments, and team name and number. This task will be undertaken with assistance from the Awards Coordinator (if available).
 - Oversee equitable award distribution
 - Present final awards list and scripts to Emcee for Awards Ceremony with the Awards Coordinator
 - Discuss Awards Ceremony presentation procedures with judges and direct them to competition area for presentation of Awards

Judge Responsibilities

- As a Judge, you should review the following information prior to the event:
 - The game description and/or game manual
 - Knowing the tasks the teams will be trying to complete is essential to evaluating their robots on a technical level.
 - For more information on this year's game, including the game animations, please visit: <http://www.vexforum.com/wiki/index.php/Gateway>
 - The tournament schedule
 - The Judges' Handbook (Included in this Judges' Handbook)
 - Judging Rubrics (Included in this Judges' Handbook)
- During the event, judges must:
 - Interview and or visit with teams in the appropriate area, and most likely this will be done in the Pit Area at most events. Please ask your judge advisor for additional information.
 - Determine how individual teams performed, making notes to be used during the deliberations
 - Many events will choose to use the Judging Rubrics (included after the award descriptions). If your event is using the rubrics, every judge will be responsible for completing their rubric and submitting it to the Judge Advisor.

- During judging deliberations, judges must:
 - Determine the top ranked teams for each award, and eventually the winners of these awards
 - Work with other judges to determine the Excellence Award winner
 - Share their notes on winning teams with the Judge Advisor for use in the Awards Ceremony script
- Judges should plan on attending and participating in the Opening and Awards Ceremonies
- Remember to wear comfortable attire and shoes

Awards Coordinator Responsibilities

- Assisting the Judge Advisor with all judging responsibilities
- Collecting all ballots for awards being judged by teams and/or volunteers and/or local event organizers
- Organizing and recording Judging Rubrics at the Judge Advisor's request
- Maintaining the Excellence Award Spreadsheet (if being used)
- Setting up and preparing the trophies for the awards ceremony
- Working with the Judge Advisor to prepare the scripts for the award ceremony

Judge Training

Your Judge Advisor will arrange for some form of judge training. Typically this training will involve reviewing this document, discussing the interview process, reviewing the current game and discussing judging rubrics (when applicable). This training may take place prior to the event or on the morning of the event. Please check with your Judge Advisor or local tournament organizer for more details. Regular REC Foundation judge training calls are open to all event partners, Judge Advisors, Judges, and Awards Coordinators. On each conference call, we will focus on lessons learned from previous events, preparing for upcoming events, share “best practices”, and answer any questions. These conference calls can serve as a resource to train and prepare, please feel free to join us! Here is a schedule of judge training calls:

<u>Date:</u>	<u>Time:</u>
4-Oct-11	6:00 PM Eastern
4-Oct-11	9:00 PM Eastern
3-Nov-11	6:00 PM Eastern
3-Nov-11	9:00 PM Eastern
6-Dec-11	6:00 PM Eastern
6-Dec-11	9:00 PM Eastern
12-Jan-12	6:00 PM Eastern
12-Jan-12	9:00 PM Eastern
7-Feb-12	6:00 PM Eastern
7-Feb-12	9:00 PM Eastern

For your convenience, our call-in info will stay the same every month. Call this number to join: 800-236-2165, the access code is 843593230. If you have specific topics or questions that you want addressed, please send an email to brad_lauer@roboticseducation.org ahead of the call.

Interview Tips & Sample Questions

Getting the students talking is often a harder task than it may seem. Here are some standard questions that are typically effective:

- What part of your robot are you most proud of? Why?

- How did you choose this particular design?
- What exactly does your robot do and how?
- What does your robot do in autonomous mode? How did you program it?
- What makes your robot more effective than others at playing the game?
- Did you use any sensors? What are they used for?
- If you had one more week to work on your robot, what would you change?
- If you were able to change this robot based on what you have seen at the tournament, what would you change?
- Which other robots/teams most inspired your robot design?
- If your event is awarding the Design Award, make sure to ask each team for their Engineering Notebook. Take time to review the notebooks before deliberations
- Be prepared to re-word your questions if you find that the team is struggling to understand or answer.
- Try not to ask questions that allow the teams to answer with a yes or no, and encourage the teams to elaborate on their answers.
- The students will be nervous. A tournament can be a stressful experience. Asking them questions about their robot can help to put them at ease.
- Being a judge, you have the unique opportunity to impact these students. They will be looking to you for positive reinforcement. Just a few words can make their day. Try to ensure that each team leaves with a positive feeling about their performance at the competition.

The Deliberation Process

Awards are to be spread as equitably as possible among the teams, with no team winning more than one judged award if possible. A team should only win additional awards if they are for Robot Performance (tournament champion, tournament finalist and/or programming skills champion, and/or robot skills champion) or there are no other qualified teams. Awards given to coaches and mentors do not apply to the team's eligibility for an award.

The Judge Advisor should run the deliberation process as follows:

- The Advisor will lead the judging group to determine award winners.
- Based on the criteria listed in Appendix E and the "Award Criteria" section of this document, each team of judges decides its top candidates for an award. During deliberation for each award, each judging team presents its top choice(s), and shares reasons they are recommending these teams.
 - Good notes from interviews can be very important here. Through consensus, the group then determines the top five or six teams in each award category
 - Of additional importance are the judging rubrics and scores from each judge or judge panel
- After determining the top candidates for each award, judges should use this information to discuss and decide upon the Excellence Award recipient. It may be necessary to revisit teams to make a final determination.
- Next, the overall top candidates for each award are discussed as you work towards obtaining an award winner by consensus.
 - **NOTE:** It will often be the case that the same team will be the top candidate for multiple awards. If this happens the judging panel needs to determine which award they believe the team deserves the most and give them that award. From there, discuss again on the new candidate pool (minus the team who has already been given another award) to determine the winner. This is why it is critical to have multiple candidates for each award.
 - **For tournaments using the judging rubrics, top candidates can be easily identified by compiling the scores from each judge's rubric.**
- If necessary, judges should revisit the top teams, by either informally watching them on the field or visiting them in the Pit. This last visit will help determine the final award winners.
- Before final award assignments are made, the Judge Advisor checks with the judges to ensure that judges are comfortable with results. Decisions need not be unanimous but a definite consensus must exist.
- This process is designed to allow for normalization of judging scores. When numerical scores are used (as in the case of the judging rubrics), some judges naturally score higher; others lower. This often results in the teams visited by high scoring judges gaining an unfair advantage. Scores obtained during the initial interviews help to identify teams that need a closer look. After additional fact finding the rank ordering occurs for each award.

Judging Schedule

The entire judging process will take place during the competition. When scheduling your judging teams, it is recommended that each judging panel visits one team every 10-15 minutes. Anything more than this, and the judges will not see a wide enough selection of teams to get a good basis of comparison and any more becomes too time consuming. The Judge Advisor will prepare a list of teams that each judging team is responsible for, along with match schedules for each of these teams. Please keep in mind that many events do not generate their match list until the morning of the event, in this case, please check with your Judge Advisor for which teams you are supposed to interview.

The following is a sample schedule for a tournament with 24-36 teams. The judge advisor for the tournament will set the schedule along with the tournament coordinator. Please note that tournaments should take the number of teams to be judged into consideration when deciding when final scripts will be completed. Events that host a larger number of teams may choose to spend more time interviewing teams and less time refining their scripts in order to evaluate their teams in a comprehensive fashion. The tournament organizer has final say on when scripts will be finalized.

Sample Schedule

7:30 – 8:00	Judge Advisor reviews training materials, makes final assignments
8:00 – 8:30	Judges arrive, review any team notebooks (if applicable) for teams they will interview
8:30 – 10:00	Teams of judges complete initial interview of assigned teams
10:00 – 10:30	Attend Opening Ceremonies
10:30 – 11:30	Continue with interview/observation of assigned teams in pits and on field
11:30 – 12:00	Return to judging room and each panel of judges identifies their top candidates for each award. (Either on chart paper or a white/chalk board)
12:00 – 12:30	Lunch Break – Final call for balloted awards
12:30 – 1:30	Initial deliberation on top candidates for awards
1:30 – 3:00	Judges observe teams in pit area and on field, and return to the competition field to do follow up interviews and observation as necessary to complete the rank ordering for each award category. If possible, all judges should have an opportunity to visit with the top contenders for each award
3:00 – 3:30	Judges return to judge room to conduct final deliberations and determine award winners.
3:30 – 4:30	Write scripts for all award winners. Please note: all scripts should be finalized by the beginning of semi-finals at the latest. Events with 24-36 teams should be finalizing their scripts no later than quarter-finals.
4:30 – 6:00	Attend finals and award ceremony

Judging Materials

The following is a list of suggested materials for the Judge Advisor and Judges to use on tournament day.

- Judges' Handbooks
- Judging Rubrics (if used)
- Appendix E – Awards from the Gateway Game Manual
- Awards Ceremony Script
- List of judges
- List of awards to be given out
- Map of tournament/Pit Map
- Master schedule
- Event Program (if available)
- Clipboards
- White board or flip charts and easels with markers
- Large table for Judge Advisor
- Large table for judging materials
- Seating for final deliberations
- Post-its
- Tape

- Pens, pencils, erasers, highlighters
- Judging rubrics (if applicable)

Award Criteria – Excellence Award

This is the highest award presented in the VEX Robotics Competition. The recipient of this award is a team that exemplifies overall excellence in building a well-rounded VEX robotics program. This team excels in many areas and is a shining example of dedication, devotion, hard work and teamwork. As a strong contender in numerous award categories, this team deserves to be recognized for building a quality robot and a “team” committed to quality in everything that they do.

Teams are given points towards the Excellence Award in the following categories:

- Tournament Qualification Round Ranking
- Programming Skills Challenge Ranking
- Robot Skills Challenge Ranking
- Judged performance in all other award categories

Using this wide range of criteria, the Excellence Award will be presented to the team who excels in all areas of VEX Robotics. With many tournaments offering a World Championship qualifying spot to the Excellence Award winner during the Gateway season, we recommend the following rubric be used to calculate the Excellence Award winner at local events:

<u>Team #</u>	<u>QR Ranking 1</u>	<u>PS Ranking 2</u>	<u>RS Ranking 3</u>	<u>Judge Ranking 4</u>	<u>Tie-Breaker 5</u>

- 1 A **QR Ranking** Point is earned for finishing in the top 8 of the qualifying matches (one point available)
- 2 A **PS Ranking** Point is earned for finishing in the top 10 of the Programming Skills contest (one point available)
- 3 A **RS Ranking** Point is earned by finishing in the top 10 of the Robot Skills contest (one point available)
- 4 **Judge Ranking** points are awarded for every judged award for which a team is a finalist (up to 4 points available)
All **ties** in the Excellence Award calculator will be broken by awarding the higher ranked team in the Gateway competition one additional point

Please Note: Some events may decide to offer two Excellence Awards, one for the top overall Middle School team and one for the top overall High School team if they feel they have enough teams in each group. Please see the official tournament criteria for more information.

At the 2012 VEX Robotics Competition World Championship, only teams that have submitted at least 1 online Design Challenge, have won an Excellence Award at a previous event, have signed up for an Excellence Award interview, and have signed up for a Design Award interview (with their engineering notebook) will be considered for the Excellence Award.

Excellence Award at World Championship

Criteria to Qualify for World Championship Excellence Award Consideration:

- Must have created a submission for at least 1 online design challenge
- Must have signed up and interviewed for the Design Award with your engineering notebook

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- Must have won an Excellence Award during the competition season

Additional Considerations for World Championship Excellence Award:

- 1 additional point for submitting an online challenge (up to 2 points total)
- 1 point for scheduling and attending a Design Award interview
- 1 point for every Judged Award the team is listed as a top candidate for consideration by the Judges

At the 2012 VEX Robotics Competition World Championship, each division will determine an excellence award winner. Judge Advisors from the High School division will determine 1 overall Excellence Award. Additional Excellence Awards will be given for the Middle School and College Challenge categories to be announced after finals. Previous winners of the overall Excellence Award will not be eligible for the Excellence Award at World Championship.

Award Criteria

For full details on all awards, please see Appendix E – Awards from the official Gateway manual. **Please Note:** Not all awards will be given out at all tournaments. Please check with your local tournament organizer and/or your Judge Advisor to confirm which awards will be used at your event. Planned awards should not be “force fit” if solid candidates for an award are not identified. In this case the award should not be presented.

Award Quick Reference Guide

Team Awards:

- AMAZE Team with an amazing, well rounded and top performing robot
- BUILD Team with a well crafted robot
- COMMUNITY . Team with extraordinary community involvement and awareness
- CREATE Robot with a creative engineering solution
- DESIGN Team with a professional design approach (ie Engineering Notebooks!)
- EDUCATE..... Team that integrates robotics into their classroom STEM activities
- ENERGY..... Team with extraordinary enthusiasm
- EXCELLENCE...Overall top honor in the VEX Robotics Competition
- FUTURE** FUTURE Foundation Robotics Construction Challenge
- INNOVATE.....Team that has the most “Innovative” single design feature on their robot
- INSPIRE**Team that has earned respect from their peers for innovative and creative design solution
- JUDGES.....Team that deserves special recognition for their efforts leading up to, and during, the event
- PROMOTE**.....Team that creates the strongest video promoting VRC (submitted on Robotevents.com)
- SPORTSMANSHIP is awarded to the team that most exemplifies competing in a friendly and respectful way
- SUPPORT.....Team that most helps others enjoy their experience through advice and assistance
- TEAMWORK**...Group with multiple teams competing and communicating effectively together
- THINK.....Team with an impressive and effective autonomous programming

Individual Awards:

- Mentor of the Year.....Mentor that had the greatest impact on their team
- Partner of the Year**...Partner identified as the strongest “Champion” in the VEX Robotics Competition
- Teacher of the Year**..Teacher showing the most leadership and dedication
- Volunteer of the Year...Volunteer evaluated as the most passionate and dedicated person at the event

**Indicates that specified award may only be given at VEX Robotics Competition World Championship

Amaze Award: 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.

Award	Interview Criteria	On-Field Criteria
Amaze Award	- Robust overall design - Solid construction (robot doesn't "wobble")	- Consistency at achieving desired tasks - Robot performs reliably

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	<ul style="list-style-type: none"> - Evidence of a design process - Simple and elegant design - Clear explanation of design characteristics - Integration of sensors for use in both autonomous and tele-operated mode 	<ul style="list-style-type: none"> - Robot holds up under competition conditions - Robot is easy to operate - Robot makes the game look easy - Robot performs well in autonomous mode
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Key Criteria:

- 1) Robot design is consistently high-scoring and competitive
- 2) Robot autonomous mode is consistently successful
- 3) Robot is robustly constructed to fulfill its designed task
- 4) Teamwork and interview quality

Build Award: 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. Judges will be looking for robots that have a professional feel and quality look to them, with clear attention to detail in construction, efficient use of mechanical and electronic components, and reliability on the competition field.

Award	Interview Criteria	On-Field Criteria
Build Award	<ul style="list-style-type: none"> - Robust drivetrain - Robust mechanism(s) - Solid construction (robot doesn't "wobble") - Subsystems are cleanly integrated - Subsystems are thought out and purposeful - Simple and elegant design - Robot does not present any safety hazards 	<ul style="list-style-type: none"> - Robot holds up under competition conditions

Key Criteria:

- 1) Robot construction is of professional quality; robust, clean and elegant use of build materials
- 2) Robot efficiently uses mechanical and electrical components
- 3) Robot is designed with detailed attention to the hazards and rigors of the competition
- 4) Teamwork and interview quality

Community Award: The Community Award is presented to a team that should be recognized for making a difference in the community as judged by the local VEX Robotics 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.

Award	Interview Criteria
Community Award	<ul style="list-style-type: none"> - Evidence of meaningful community support - Has the team gone out of their way to give back to the community, whether it be robotics related or not

Create Award: The Create Award is earned by a team whose robot design incorporates a creative engineering solution to the design challenges of this year's game. Judges will be looking for teams that are able to demonstrate a highly creative engineering process that incorporates solid mechanical ability, unique design solutions, and innovative approaches to the game play.

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Award	Interview Criteria	On-Field Criteria
Create Award	<ul style="list-style-type: none"> - Clear explanation of creative strategy or design process - Able to describe why they felt this creative approach was effective 	<ul style="list-style-type: none"> - Demonstrate creative game strategy or show the effect of the creative design process

Key Criteria:

- 1) Robot is a well-crafted, unique design solution, demonstrating creative thinking
- 2) Team has demonstrated a highly creative engineering design process and methodology
- 3) Team has committed to ambitious and creative approaches to playing the game
- 4) Teamwork and interview Quality

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. Teams registering for this award at World Championship will be assigned a 10 minute time slot during which the team will set up and deliver a presentation to judges. The winning team will be able to describe how they implemented an efficient and productive design process to accomplish the project goals.

Engineering Notebooks:

One of the main missions of the VEX Robotics 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 Robotics 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. The Engineering Notebook requirement of the Design Award has no specified format; each notebook should be created through a concerted effort by a team to document their design decisions. Throughout the season, many larger events will send their Design Award winner to World Championship, and as a result, teams should start their notebooks early and update them often.

Engineering is an iterative process. Iteration requires a student to 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 process that students should document in their Engineering Notebook.

Additionally, the Engineering Notebook is an opportunity to document everything a team does so that it can serve as a historical guide of lessons learned and best practices. Students may include a plethora of things in their Engineering Notebook including: team meeting notes, design concepts and sketches, pictures, notes from competitions, biographies of team members (students, teachers and mentors), team members' observations and thoughts, team organization practices, and any other documentation that a team finds useful.

Judging of Engineering Notebooks:

Creating and maintaining an Engineering Notebook is in no way "required or mandated" for teams participating in the VEX Robotics Competition. Although the Engineering Notebook is not required, maintaining an Engineering Notebook is highly recommended because the process can have many benefits for the team. For instance, the development of technical writing skills is a valuable tool to acquire. There is only one award given at the VEX World Championship (and some local events) which requires that teams to present their Engineering Notebook to the judges - the Design Award. However, all teams are encouraged to create an Engineering Notebook and bring it to events to show and discuss with Judges. If an event has scheduled judging sessions teams should bring their engineering notebook to the session. Judges are always interested in learning and seeing the various skills students acquire and demonstrate through their participation in the VEX Robotics Competition. Teams are welcome to bring support materials, flyers, team promotional materials and items such as an Engineering Notebook to events to share with judges. It is encouraged that all members of a team contribute to this project throughout the season.

Award	Interview Criteria	Engineering Notebook Criteria
Design Award	<ul style="list-style-type: none"> - Evidence of a clear design methodology 	<ul style="list-style-type: none"> - Professionally laid out such that it can be easily understood

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	- The team has found an efficient way to organize and manage their team to allow the best utilization of team resources	- Regularly updated, documenting all team efforts - Information is easily found, making the notebook a useful tool to all team members - Evidence of an iterative design process, highlighting the various phases their robot development
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Key Criteria:

- 1) Engineering Notebook is a clear, complete document of the team's design and build process
- 2) Team is able to explain their design and strategy throughout the season
- 3) Team demonstrates personnel, time and resource management throughout the season
- 4) Teamwork and interview quality

Educate Award: The Educate Award is given to a team that has been able to successfully integrate VEX Robotics into their Science, Technology, Engineering and Math (STEM) curriculums. The winning team will demonstrate to the judges that VEX Robotics is not just an extracurricular activity, but a valuable tool used in their school to teach across many subjects in the classroom.

Award	Interview Criteria
Educate Award	- The team demonstrates how Robotics is now incorporated in school curriculum - The team explains how they were able convince the school to expand and enhance their STEM education with robotics

Energy Award: The Energy Award is based on team enthusiasm displayed at the event. The winning team will demonstrate boundless passion and energy throughout the competition – in the pit area, on the field, and in the audience, even when their robot is not playing.

Award	Interview Criteria
Energy Award	- Team exhibits genuine excitement and energy while answering questions. - Displays a passion for competition and robotics.

Key Criteria:

- 1) Team maintains a high level of energy throughout the event
- 2) Team demonstrates support for all participants
- 3) Team's positive energy enriches the event experience for others
- 4) Teamwork and interview quality

Future Award: Please go to <http://forum.robotevents.com/design/> for more information on the FUTURE Foundation Robot Construction Challenge. Be sure to check out all of the other 2012 Design Challenges!

Innovate Award: 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.

Award	Interview Criteria	On-Field Criteria
Innovate Award	- Clear explanation of a specific innovative machine feature	- Successful demonstration of innovative machine feature

	<p>- Able to describe why the innovative feature was necessary. Why were conventional means not used? (The award is not meant to recognize innovation for the sake of innovation, rather innovation for the sake of excellence)</p>	
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Key Criteria:

- 1) Robot design demonstrates an ingenious and innovative piece of engineering
- 2) Innovative feature is soundly crafted and is an effective solution to a design problem
- 3) Innovative solution is integrated as a part of an overall well crafted robot
- 4) Teamwork and interview quality

Inspire Award: The Inspire Award is presented to a team that demonstrates outstanding leadership through action with other teams. This team will be identified by their peers as a leader in innovative and creative design in the robotics community. The recipient team serves as an example to others and embraces the concept of cooperative learning. Cooperative learning will be based on inspiring other teams' designs or openly sharing their design ideas with others. While local/regional events are permitted to give this award, it will be given primarily at the World Championship. Prior to the World Championship, all teams will be asked to respond to an online ballot. Only teams attending the World Championship will be eligible. Teams are encouraged to keep a list of teams that inspired them throughout the season and respond to online voting request starting on March 20, 2012. The judging panel will interview potential recipients (at World Championship), based on the nominations through team balloting, and choose the team that stands out as a worthy recipient.

Award	Interview Criteria
<p style="text-align: center;">Inspire Award</p>	<ul style="list-style-type: none"> - Team has been identified by their peers - Team has embraced the concept of cooperative learning- Team has shared their engineering and competition approach in public and at competitions - Team has inspired other teams with their design ideas

Judges' Award: The Judges' Award goes to a team the judges decide is deserving of special recognition. Judges consider a number of possible criteria for this award, such as team displays of special attributes, exemplary effort and perseverance at the event, and team accomplishments or endeavors throughout the season that may not fall under existing awards - but are nonetheless deserving of special recognition.

Mentor of the Year Award: This award is given to a mentor or engineer that has helped their 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 worlds of STEM. The recipient of this award will be nominated by the students on their team with a written submission detailing how the mentor inspires, motivates and educates students in a positive, enthusiastic and challenging atmosphere.

Partner of the Year Award: The Partner of the Year Award is presented to an organization that consistently supports students and schools as they pursue excellence in the VEX Robotics Competition. There are many partners and organizations that deserve recognition for their support of the REC Foundation and the VEX Robotics Competition. This partner supports student and school efforts to advance educational opportunities in Science, Technology, Engineering, and Math (STEM) subject areas; their generosity creates a positive impact for all those touched by the VEX Robotics Competition. The recipient of this award is recognized as a "champion" that fights for affordability and accessibility for all participants.

VEX Robotics Competition World Championship Judges' Handbook– GATEWAY

Promote Award: The Promote Award is presented to a VEX Robotics Competition school, club or team that has created and submitted an outstanding VEX Robotics promotional video. This video promotes the team in the community in order to recruit new students, mentors, and support. This video may be about the team, the program, the competition, the design and build process, the robot itself or any theme the team can dream up to help promote its VEX Robotics program to their community!

Videos will be submitted to the “Online Design Challenge” section at www.RobotEvents.com. The Online Design Challenge section will go live with multiple challenges by November 1st, 2010 and teams can begin to submit their entries at that time. Check www.robotevents.com for details on the Promote Award.

Key Criteria:

- 1) Video is exciting, of high production and editorial quality, and expresses a complete vision
- 2) Video is original and innovative in approach, in editing and content
- 3) Video is clear and easy to follow, with a message that is easily followed

Sportsmanship Award: The Sportsmanship Award is presented to a team that has earned the respect and admiration of the volunteers and other teams at the event. This team is a model for all to follow because team members interact with everyone in a positive, respectful manner in the spirit of friendly competition and cooperation. This award is judged during the event by teams, referees and volunteers.

Key Criteria:

- 1) Team is courteous, helpful and respectful to everyone at the event, on and off the field
- 2) Team treats others on the playing field in the spirit of friendly competition
- 3) Team demonstrates respect and willingness to help to event staff and spectators

Support Award: The Support Award is given to a team that is always willing and able to help other teams in need of assistance. There are many forms of “support” that can be given at an event: resources, knowledge and encouragement are some of the most important ways teams support each other throughout the competition. This award is judged and voted on by the teams participating at the event.

Key Criteria:

- 1) Team is always willing to help others by sharing resources, knowledge, and encouragement
- 2) Team has helped not only alliance partners, but all teams, by sharing resources
- 3) Team has enriched local VRC events by volunteering personnel and/or resources

Teacher of the Year Award: The Teacher of the Year Award is presented to a teacher who shows true leadership and dedication to his or her group of students. The winner of this award continually exceeds expectations to ensure a safe, enjoyable and educational experience for all students. The recipient of this award will be nominated by the students on their team with a written submission detailing how the teacher inspires, motivates and educates students in a positive, enthusiastic and challenging atmosphere.

Teamwork Award: The “Teamwork” award is presented to a group of teams from a single school, or organization, that demonstrates a season-long commitment to cooperation, unity and mutual respect. The Teamwork award is presented to a school, or an organization, that has built a sustainable multi-team robotics program. This award recognizes a school, or a group of teams from a single organization, that demonstrates the ability to field multiple independent robotics teams which also work and collaborate together to enrich the experience of all students involved. At the World Championship, this award will be judged based on a 500-word online submission and subsequent team interviews.

Award	Interview Criteria
Teamwork Award	<ul style="list-style-type: none">- Multiple teams working together in a single group or school- Teamwork demonstrated within their group and in their groups' interactions with others- Evidence that working as a team has strengthened the learning process of the

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	individuals
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Key Criteria:

- 1) Team demonstrates commitment to respect to all, throughout the season and at each event
- 2) Team demonstrates that they work well with their alliance partners, before, during and after a match
- 3) Team demonstrates an internalized culture of teamwork, mutual respect and cooperation
- 4) Teamwork and interview quality

Think Award: The Think Award is presented to a team that has successfully utilized autonomous programming modes during competition. The winning team will have quality, consistent and successful autonomous programs as part of their strategy and team members will be able to explain their programming process from strategy to syntax. This award may be judged by the referees, programming inspectors and/or members of the judge panel.

Award	Interview Criteria	On-Field Criteria
Think Award	<ul style="list-style-type: none"> - Use of sensors to control motion - Advanced programming techniques - Clear explanation of programming methods - Evidence of repeatability and reliability - Ability to achieve multiple tasks in one mode - Evidence of multiple autonomous modes 	<ul style="list-style-type: none"> - Autonomous mode consistently achieves desired objectives - A simple mode which works consistently is preferred over a jaw dropping mode which only works occasionally

Key Criteria:

- 1) Team's autonomous code is effective to task, cleanly written, well-defined, and elegantly designed
- 2) Team has explained a clear autonomous strategy, that is a part of their overall strategy to win the game
- 3) Team's autonomous code is consistently successful in the field
- 4) Teamwork and interview quality

Volunteer of the Year: VRC events don't just materialize; it takes the collective effort of many people who are willing to give of their time and efforts for the sake of the participants. At the root of each event, you can usually find an individual spearheading the effort to "make things happen."

The Volunteer of the Year will be easy to spot because of his/her enthusiasm, dedication and results oriented approach to bringing the experience and opportunities available through VEX Robotics to as many students as possible. The recipient of this award demonstrates a commitment and devotion to their community, putting in many hours of hard work with persistence and passion to help make the event happen.