



## 2004 BEST Award Requirements

The BEST Award is presented to the team that best embodies the concept of *Boosting Engineering, Science, and Technology*. This concept recognizes that inclusiveness, diversity of participation, exposure to and use of the engineering process, sportsmanship, teamwork, creativity, positive attitude and enthusiasm, and school and community involvement play significant roles in a team's competitive experience and contribute to student success in the competition beyond winning an award.

In accordance with the BEST philosophy, **materials submitted by teams must be the work of students**. The involvement of student peers in auxiliary roles to support a school's official BEST team with the documentation – i.e., journalists, photographers, artists, musicians – is encouraged.

Space constraints at each regional competition site will determine the number of teams that can compete for the BEST Award (check with the specific guidelines published by each regional site). In order for a team to be eligible to compete for the BEST Award at any of the regional competitions, the team: (1) must have competed for the BEST Award at their local hub competition, and (2) must agree to compete in all five of the BEST Award categories (including the Formal Presentation) at the regional competition. Advancing BEST Award teams will be required to participate in the Formal Presentation category (not described herein) at the regional competition.

### *Eligibility*

All teams competing in the Capitol BEST contest are eligible for the BEST Award. All teams are required to turn in a Project Summary Notebook (a.k.a. design notebook).

Consideration for the BEST Award will include evaluation of

- material submitted in advance to the judging committee
- evaluation of the machine on contest day

## *Evaluation and Judging Procedures*

### Criteria

- Evaluation of competitors will be based on the criteria outlined in these guidelines. An evaluation score of a total possible 75 points will be composed of the following:

<b>Category</b>	<b>Judging Category</b>	<b>Point Value</b>
I	Project Summary Notebook	30 points
II	Table Display	15 points
III	Informal Interviews	10 points
IV	Spirit and Sportsmanship	15 points
V	Robot Performance	5 points
	<b>TOTAL POSSIBLE POINTS</b>	<b>75 points</b>

### Judging Procedure

- A distinguished team of judges from private and public sectors with technical and non-technical expertise will evaluate teams.
- As each team completes a category, it will receive a category score that is the average of individual scores of the judges reviewing it.
- Teams should know in advance that scores among many teams frequently differ by only fractions of a point.
- Throughout the judging process, the judges may take into consideration the resources available to teams to conduct their BEST programs (financial or technology resources, for example).

### Results

- Each advancing team will be mailed a copy of its score sheets following their local competition. Score sheets of non-advancing teams will be mailed upon request.
- Teams advancing to the regional competitions can use judges' comments to make improvements as they wish.

### Judging Locations

Spirit and Sportsmanship will be judged based primarily on team members in the contest arena and PIT areas. To facilitate judging for Spirit and Sportsmanship on Saturday, BEST Award teams should be easily identifiable through team dress, posters, etc. Table display evaluation

will be in the designated area and informal interviews will take place in the PIT area at the respective team's worktable.

### **Category I: Project Summary Notebook (30 Points)**

#### **Guidelines**

- The purpose of the notebook is to document the process the team used to design, build, and test their robot.
- ALL teams (both BEST Award and non-BEST Award competing teams) are required to submit a Project Summary Notebook.
- The notebook must be received no later than **9:00pm, Friday, 15 October 2004 (Machine Check-In)**.
- The notebook must meet the following specifications:
  - Submitted in a *standard* 3-ring binder with a maximum 2" ring size
  - 30 typed pages or less
  - Within the 30 pages, include a description of how the current year's game theme is related to current technological practices or scientific research (minimum of 2 pages, maximum of 5 pages out of the 30 allotted)
  - Binder cover must identify the school, team name, and teacher contact
  - Provide description of the process the team used to design and complete its robot
  - Standard, 8 ½" x 11" paper, double-spaced, 1" margins, and Times New Roman (preferred) or similar business-style font no smaller than 12 pt. Single-spacing is acceptable in tables and outlines.
  - In supplemental appendices of up to 20 pages in length, teams may provide additional material as support documentation, such as drawings, photos, organization charts, minutes of team meetings, test results, etc. *This material should directly support the process described in the primary document and NOT reflect activities related to community or promotional efforts, spirit development, or team-building.*

#### **Evaluation**

- The notebook will be judged on the documentation of the team's:
  - Implementation of the engineering design process

- Evidence that the engineering process was effectively used.
- Brainstorming approaches  
How well organized and productive was the brainstorming approach used and documented?
- Analytical evaluation of design alternatives  
Use of analytical and mathematical skills in deciding upon and implementing design alternatives
- Offensive and defensive strategies  
Analysis of gaming strategies and design elements to achieve goals.
- Design creativity  
Overall use of design creativity to solve the problem presented in the game.
- Overall quality of notebook  
Organization, appearance, adherence to specifications and quality of content
- Support documentation  
CAD /other drawings, photos, organization, team minutes, test results, etc. that support the main document.

## **Category II: Table Display (15 Points)**

- The purpose of the table display category is to:
  - Communicate through a display information about the team's efforts to promote BEST in the community and schools
  - Foster BEST spirit, camaraderie, and participation
  - Give evidence of sportsmanship

### **Guidelines**

- The space allotted for each table display is approximately 6' x 6'.
- Easels, folding tables and other display materials are to be provided by the team.
- Each team is responsible for security of its own material.
- Each team is responsible for breakdown of its display and cleanup of its designated area following the awards ceremony.
- All material should be clearly marked with the appropriate identification and contact information.
- A single power strip will be provided at each display.

- Any audio-visual equipment needs and extra extension cords will be the responsibility of the team.
- Each team may set up its display anytime on Friday after it has completed registration check-in. All teams must have their exhibits set up by 9:00 a.m. Saturday morning.
- Any team that does not have its exhibit in place by 9:00 a.m. Saturday morning will be considered in violation of the BEST Award participation requirements and lose eligibility.

### **Evaluation**

- Judges will review table displays on Game Day.
- The displays should be self-explanatory.
- No team members will be required to be in attendance during the evaluation. Any questions about the display will be covered during the informal interviews.
- Displays will be evaluated on:
  - Promotion of BEST, including recruitment and information-sharing with other schools, presentations, and demonstrations
  - Use of technology, display models or boards, or multi-media in promotion of BEST
  - Creativity in design and presentation of display
  - Publicity activities (publicity materials, media/press, fund raising efforts in school, and community efforts to other schools and community groups)
  - Compliance with above guidelines

### **Category III: Informal Interviews (10 Points)**

- The purpose of the informal interviews category is to communicate, through informal discussion with judges, information about
  - The team's design efforts
  - The team's acquired knowledge of the engineering process
  - Promotion of BEST in the community and schools
  - Fostering of BEST spirit, camaraderie, and participation

- Evidence of sportsmanship

### **Evaluation**

- Judges will conduct informal interviews on Game Day in the pit area and seating area.
- Judges will circulate among each team group and ask informal questions of both adults and students.
- Interviews will be evaluated on:
  - Enthusiasm and learning experience from BEST
  - Team recruiting (cross section of student population with multi-grade levels)
  - Level of student participation (students were the primary designers and builders of the team's robot)

### **Category IV: Spirit and Sportsmanship (15 Points)**

- Judges will evaluate this category on Game Day.
- They will observe the spirit promoted by the team during the competition rounds as well as the team's conduct throughout the day in the seating area, table display area, game floor, and pit area.
- Judges will also receive input from game officials (referees, pit workers, staging, etc.), and peer teams concerning observations about the teams' conduct.
- Peer team input will be through results of the Sportsmanship award evaluation.

### **Evaluation**

- Spirit includes the vigor, enthusiasm, and animation displayed by team representatives
- Teams can use posters, cheerleaders, musicians, mascots and costumes to increase the level of spirit
- Sportsmanship includes outward displays of sportsmanship, grace in winning and losing, and conduct and attitude considered befitting participation in sports
- Overall team sportsmanship is also demonstrated by students (not mentors) making the majority of robot adjustments and repairs during the competition

**Category V: Robot Performance (5 Points)**

- The fifth category, *Robot Performance*, will determine the final 5% of possible BEST Award points. These 5 points will be based on the total game points earned throughout the seeding competition (prior to the championship rounds) according to the following scale:
  - Team finishes in top 20% of all teams competing at hub 5 Points
  - Team finishes in top 40% of all teams competing at hub 4 Points
  - Team finishes in top 60% of all teams competing at hub 3 Points
  - Team finishes in top 80% of all teams competing at hub 2 Points
  - Team finishes in top 100% of all teams competing at hub 1 Point
  - Team is unable to score any points during the competition 0 Points

Up to 5 Robot Performance points will be added to the total BEST Award points.

### ***BEST Award Recognition***

- The teams ranked first, second, and third in the BEST Award Division will receive trophies and individual medals superior to the teams finishing first through third in the Game Division.
- Ties will be allowed only after detailed review by the judges.
- Presentation of the BEST Award trophies will be made during the awards ceremony on Game Day.

### ***Advancing to a BEST Regional Competition***

The total number of teams a hub will be allowed to send to a regional competition is determined by the regional competition. Traditionally this number is related to the number of teams competing at the hub, the total number of teams in the region, and the number of teams allowed in the region's playoffs. Priority for advancement to a regional competition is given to BEST Award Winners. If a BEST winner also places as a Game winner, the highest qualifier is used, then proceed with the order of winners. The number of advancing teams from each hub will be determined at a later time and each hub will be notified prior to their local competition.

BEST Award Winner 1st Place	1 <sup>st</sup>
Game Winner 1st Place	2 <sup>nd</sup>
BEST Award Winner 2nd Place	3 <sup>rd</sup>
Game Winner 2nd Place	4 <sup>th</sup>
BEST Award Winner 3rd Place	5 <sup>th</sup>
Game Winner 3rd Place	6 <sup>th</sup>
Game Winner 4th Place	7 <sup>th</sup>
Game Winner 5th Place	8 <sup>th</sup>

The list above is intended to illustrate the qualification order, not necessarily the exact number of teams advancing from each hub.