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**1998 Chairman's Award Winner
Team 23
Boston Edison &
Plymouth North High School**

1. CHAIRMAN'S AWARD

FIRST's aim, in its broadest sense, is to transform the culture of the United States: to restore the sense of excitement, awe, respect and honor that once attached to science and technology, and especially to imbue the younger generation with an appreciation of the rewards, including career opportunities, that pursuing an enriched understanding of science and technology can bring.

The Chairman's Award was created to keep the central focus of the FIRST Competition on that ultimate goal. It remains FIRST's most prestigious award.

The competition in the arena is intensely exciting. The competitive spirit draws the entire event together. In honoring the team that wins the contest itself, we celebrate the extraordinary drive and skill that brought that victory.

But the criteria for the Chairman's Award are different, precisely because the goals of FIRST go beyond scoring points.

1.1 Judging Criteria

There is no single best way to win the Chairman's Award. Many factors come into play. It represents the spirit of FIRST, and the hopes of FIRST. It goes to a team that in the judges' estimation surpassingly represents a model for other teams and embodies the goals and purpose of FIRST.

The quality of your teamwork, both human and professional – of your partnership – is a key ingredient. So, too, is the intensity of the learning experience team members both give and receive. Because our target audience is unlimited – the entire school, the larger community and, through the mass media, the nation – the ways in which a team communicates its excitement and opens the eyes of others is also a major factor.

Among the things the judges will be looking for are concrete examples of the interactions between students and engineers, and of the spirit the shared experience developed; demonstrations of how you have awakened others in your school, your community or elsewhere to the thrill and the fun of engineering, and to FIRST itself as a vehicle for the cultural transformation it seeks to achieve; innovative ways you have devised to spread FIRST's message. Use your own imagination in helping the judges understand how your team should be an example for future teams.

1.2 Documentation

One way to help the judges understand your team and what its experience together has meant is through the documentation you submit.

The Competition is not only about machines. It is also about people. Above all, it is an experience. By recording and evaluating our experiences, we more fully understand and better remember them. Thus, recording, documenting and preserving the FIRST experience becomes an important element of the team experience itself.

Whatever documentation you submit will be a key factor in the selection process, along with the judges' own observations at the competitions. Your submission need

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not be professionally produced; what matters is that it clearly convey to the judges the spirit and the nature of your team partnership.

We strongly encourage every team, as part of its team effort, to prepare a comprehensive record of its experience in a form that will be meaningful (a) to its members as an appreciation and memento, and (b) to others as an explanation of both the experience itself and of its effect and its meaning.

In preparing this record, bear in mind that the students, the engineers, the teachers and the machine itself are all integral parts of the team, while families and other supporters are often also part of the experience.

This record can take the form of scrapbook, video, photos, essays, clippings, documents, or any combination. In past years, many teams have recruited additional members precisely for the purpose of documenting the effort. This not only lets those preparing the record concentrate on documenting and illustrating it; it also exposes a broader cross-section of the student body to the FIRST experience, and thus further advances the FIRST goal of raising non-technical people's awareness of what engineers can do and how they can do it.

We encourage you to send your documentation, or a condensed version of it, to FIRST. Those submitted to FIRST will be considered in the judges' selection of the Chairman's Award winner if submitted on time and within the limits specified for that purpose. And remember: the process of documentation can itself become a vital part of the FIRST experience. It helps focus your own team's attention on the central purposes of FIRST. It also becomes a rich source of inspiration for the staff, the Board and other supporters of FIRST in charting FIRST's future.

1.3 Submission Requirements/Deadline

To be considered for the Chairman's Award, the submitted form of your documentation must be capable of being read and/or viewed in a total of **no more than 15 minutes**, and must **not** be more than 14 inches wide, 14 inches long and 5 inches high. If, as may well be the case, you have documented the experience more extensively for your own purposes, then your Chairman's Award version must be condensed to come within these limits. The growing number of teams has made such limits necessary.

THE DEADLINE FOR ALL CHAIRMAN'S AWARD SUBMISSIONS IS 5:00 PM ON THURSDAY, FEBRUARY 18, 1999. Submissions that exceed the size and/or review length limits, or that arrive after the deadline will not be considered.

An independent panel will review all submissions prior to the National Championship. Submissions will then be brought to the National Championship, where the national judges will review them in selecting four Chairman's Award Finalists and the Chairman's Award Winner. The traveling trophy for this award, the Competition's highest award, is a high-tech, custom crafted Dean Kamen clock, what The New York Times called "Art That Ticks."

2. FOUNDER'S AWARD

Each year FIRST presents this award to honor a company, university or individual that has contributed significantly to the growth of The Competition through year-round efforts. Last year's winner, Johnson & Johnson will pass on the traveling trophy clock to the 1999 winner at the Awards Celebration in Orlando.

**1997 Chairman's Award Winner
Team 47
Delphi International &
Pontiac Central**

3. WOODIE FLOWERS AWARD

The Woodie Flowers award celebrates **effective communication** in the art and science of engineering and design. This award will be given each year to an engineer or teacher identified and described by students as the one person who has given them the best understanding of the challenges, opportunities, and satisfaction involved in the discipline of engineering and design. The judges, led by Professor Flowers, will select the recipient based on recommendation made by those students submitting a one page essay describing the engineer or teacher and his or her specific contributions. Each team submits only one recommended recipient. The single-page description can be accompanied by one or two photographs. The spirit of this award is twofold; the accomplishments in communication by the engineer or teacher is essential; and equally important, the student's ability to communicate clearly and succinctly. Communication in both directions is an integral part of learning. In this award, we recognize an individual who has done an outstanding job of motivation through communication. Additionally, the award challenges the student body to be clear and concise in recognizing the value of communication.

3.1 Background

FIRST would like each team to nominate one individual from among the many engineers and teachers working with them that truly inspires their team. This individual would best exemplify excellence in engineering instruction by explaining complex ideas to students in an inspiring way. Judging criteria will be based on the team's description of how the teacher or engineer inspired each member of the team in some or all of the following ways:

- Level of student participation
- Creativity of effort
- Clear explanation of math, scientific and engineering concepts
- Demonstrated enthusiasm for science and engineering
- Encouragement to work on projects as a team effort
- Inspiration to use problem solving skills
- Inspiration to become an effective communicator

To create an award-winning robot, each team must move forward through a complete product development cycle from designing a concept, developing a prototype, testing manufacturing and operating the machine. This requires teamwork, attention to detail, scheduling, and hard work. The award-winning essay should answer this question, "How did the nominated person inspire your team through this process?" If your essay describes examples of how this individual excels above all others in this education process, then we can look forward to presenting your team and your selected individual with an exciting award that honors Professor Woodie Flowers and his contribution to engineering, education, and communication.

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The Woodie Flowers Award will be presented to the recipient on Saturday April 24, 1999 at the National Championship Award Celebration.

3.2 How To Enter Your Nomination Essay

Prepare a one page written essay nominating one engineer or teacher on your team who exemplifies excellence in engineering, education, and communication. Students should prepare this essay as a team effort. You may include photos as part of your entry, but only if pictures help to tell your story. The cover of the essay should include the following:

- Award name
- Selected individual's full name
- Individual's affiliation
- Team name
- Names of all team members
- School involved
- Corporate partner

The Woodie Flowers Award essays are due on Monday, March 8, 1999 to Mr. Melvyn A. Saslow at the Small Parts Office (address below). The award will be presented during the award ceremony on April 24, 1999. Remember, this nomination is to specifically recognize an outstanding engineer or teacher associated with the FIRST competition and your school and team. Each team should recognize that the qualities exhibited by the engineer or teacher are paramount, but the students' ability to communicate those skills is equally important. Submissions can be mailed or faxed to:

The Woodie Flowers Award
c/o Melvyn A. Saslow, President
SMALL PARTS, Inc.
13980 NW 58th Court
Miami Lakes, FL 33014
Fax: 1-877-573-9273

4. NATIONAL CHAMPIONSHIP JUDGES' AWARDS

On Saturday evening, April 24, 1999, FIRST will hold an Awards Celebration at the Epcot Arena. At this event, a special judging panel will present the following awards:

- 1999 Chairman's Award Winner and Four Finalists
- Featherweight in the Finals
- Most Photogenic
- Johnson & Johnson Best Sportsmanship
- Honeywell Leadership in Control Award
- Woodie Flowers Award for Teaching Innovation
- Xerox Creativity
- Outstanding Defense
- 1999 National Champion
- Motorola Quality Award
- Chrysler Best Team Spirit
- Rookie All-Star
- Best Offensive Round
- The Founders Award
- Best Play of the Day
- Number One Seed

A regional series of judges' awards is also planned.

**1996 Chairman's Award Winner
Team 144
Procter & Gamble &
Walnut Hills High School**

5. AUTODESK EXCELLENCE IN ENGINEERING CREATIVITY AND COMMUNICATIONS AWARD

This award is determined by a special Autodesk judging panel prior to the event, as well as the National judges at the National Championship. See Awards Appendix A: Entry Forms, for the Excellence in Engineering entry form.

The national Award for Excellence in Engineering is presented by Autodesk, Inc. as a partner activity to the FIRST Robotics Competition. The purpose of the Award is to recognize an exemplar of student designing using powerful professional tools and collaborative creativity.

The competition period for the 1999 Autodesk Award is from January 9, 1999 to March 15, 1999. After January 9, 1999, refer to the FIRST website for all official updates on the Autodesk Award.

5.1 Award Description

The challenge of the Autodesk Award is closely aligned with real-world engineering technology application and market-driven team design practices. The Award is presented to the team that produces a videotaped 30-second “info-mercial” that meets the criteria outlined below and receives the highest score. Entries will be scored on criteria in three key areas:

Content (40pts)

Distinction in the use of CAD and animation to illustrate the engineering design, assembly, and functionality of your robot. The challenge is to show what your robot could look like and how it could function. The robot design in your entry does not have to match the final design of your team’s actual robot.

Communication (40pts)

Distinction in the use of CAD, animation and multimedia to generate excitement about your team’s solution to The 1999 FIRST Competition design problem. The challenge is to tell a clear, creative visual story about your team, your robot and your unique approach to The Competition – and to make that story memorable.

Technical Execution (20pts)

Distinction in the use of Autodesk CAD and animation technology tools. The challenge is to demonstrate how skillfully specific technology products are applied and how the final animation is brought together from storyboard through design, editing, adding FX and sound, to final product.

5.2 Judging Criteria

In scoring your Entry, judges will address the following criteria:

5.2.1 Content

A quality measured in terms of how well your team clearly and accurately simulates the design and functionality of your robot.

Tips:

- *While it is not necessary to complete your Autodesk Award Entry using the final design of your actual robot, maintain focus on the competition objective: show a design for a robot and how it could really work.*
- *Ideally, the Autodesk Award team will work very closely with the robot design group. That mirrors the practice of collaborative team design in the professional world. Your robot design and animation teams can (and should) work together to generate ideas for design, to promote your team efforts to the community, and to document your design experiences.*
- *In 1999, we have allowed three weeks between the “ship” date for your robot and the deadline for submittals for the Autodesk Award – which should allow for another check to ensure your animation represents a distinctive working robot.*
- *Use images and sounds to place your working robot in an environment (or series of environments) that gives judges a sense of where the robot is created and competes. Ways to accomplish this include scanning in pictures of your team, incorporating video of your school/community, and/or modeling and animating the playing field.*

5.2.2 Communication

A quality measured in terms of how well your team identifies a concept and organizes the content for your story. Also measured by how well your team executes on that concept and creates a distinctive and memorable “info-mercial” – one that stands out from the rest..

Tips:

- *“Brand” your team identity and personalize your Entry.*
- *Every story should have a beginning, middle and end.*
- *Make your Entry compelling and exciting to watch. Review previous entries for this Award and discuss which you think are memorable.*
- *Review your favorite commercials, computer games, videos/films. See how they balance giving valuable and clear information with using imagined characters, humor, fantasy, and other creative twists. Check with your team and ask others what makes something distinctive – and worth seeing and listening to over and over again. What makes it “the best”.*
- *A lot of information can be communicated well in 30-seconds – think about what you see every day on television or hear on the radio. But it’s a common mistake to try to do too*

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much. Focus. And test a few things to see what folks really remember about your animation.

- *Schedule design and production so that you have time to review your finished product prior to meeting the deadline. Share your work with colleagues and friends, and polish it so that it has impact and is memorable.*
- **You are required to submit a storyboard.** *Use a #3 pencil or softer to ensure that your original is readable and can be duplicated easily.*
- *Clear storyboards are like a roadmap. They should indicate that you had a solid idea of where you wanted to go and also had plans for how to get there. The storyboards are not always “pretty”, but they are inclusive and clear.*
- *Storyboards lay out the sequence of ideas and action including images, text, voice-over messages, sounds, special FX, music. At the beginning, test your storyboard with others to see if they understand what you’re trying to accomplish. Don’t give them “hints”; see if they get it – just from your boards.*

5.2.3 Technical Execution

A quality measured in terms of how well your team uses texture mapping, color, lighting, special FX, camera motion and angle, character animation, editing technique, sound effects, voice over, music, photography, or live video.

Tips:

- *Pacing—Watch television ads and note the time between camera cuts, fades, and other transitions. Also, try to use 3-5 second (90-150 frame) individual segments using Video Post to “stitch” these segments together.*
- *Efficient Mesh Model—Optimize models for the lowest number of vertices and faces.*
- *Efficient Scene Materials—Use the lowest resolution bitmap possible in materials, avoid complex material trees, and minimize reflection/refraction.*
- *Efficient Scene Lighting—Use Omni lights with caution. Because light passes through objects, more than two or three Omni lights can be confusing.*
- *Shadows are “expensive” and should be used only when necessary. Use Attenuation on all lights to limit the range of shadow calculations.*
- *Add any color to lights only after final materials have been assigned to objects.*
- *Use creative camera view angles. Avoid choppy edits.*

Special Tip: Be aware that certain images and music may be copyrighted and you may not be free to incorporate them into your Entry without special permission or fees. This includes obvious things such as clips from popular songs, but could include less obvious things closely aligned to a particular company or individual. If you have any questions about what you can and cannot include, check with your team corporate sponsor. Also review the language in the Autodesk Archive Consent and Release Authorization Form. Any further “tips” in this area will be posted on the FIRST website during the Competition period.

5.3 Judging Process

The judging panel is made up of volunteers from business, industry and education. Judges are familiar with the FIRST Competition, with previous Autodesk Award competitions, and with application of Autodesk products and other technologies in engineering, game development, film/broadcast, and both K-12 and postsecondary education.

Judges prepare in advance by reviewing the Autodesk Award guidelines, reviewing background materials on FIRST, and reviewing Award entries from previous years. On the day of judging, there is an opening discussion to ensure common understanding of criteria and of the actual scoring process. Throughout the day's judging, the order in which entries are viewed is changed from round-to-round in order to ensure a "fresh" look at the entries.

In 1998 there were four rounds of judging: Round #1 was a review and scoring of all submittals which met Entry Requirements. Judges were asked to note comments on each Entry as they marked their scoring ballots. Following Round #1, all scores were tabulated and those entries scoring higher than the predetermined "break point" were passed to a second round. Judges "flagged" for further discussion any Entry which they felt did not meet Requirements. Round #2 entries were reviewed at greater depth, with discussion as necessary. Following Round #2, "top picks" were selected and passed to Round #3. No entries were passed to Round #3 if any single judge expressed concern about that Entry's compliance with Entry Requirements. Round #3 was run in two "heats": first, the top picks were run, scored and discussed; second, judges selected a top four. In the last round, Round #4, judges took what time they needed to reach unanimous agreement on the Award Winner and recipients of Honorable Mention.

It is likely that scoring will follow a process in 1999 similar to that followed in 1998. Refer to the FIRST website after January 15, 1999 to view a "sample" judging ballot for the 1999 Award.

In 1999, judges will select a 1999 Award Winner, as well as recognize two "Honorable Mention" winners and a 1999 "Rookie" winner.

Each team submitting an Entry that is judged will receive a copy of their score indicating where they ranked in the overall field, as well as verbatim comments from judges. Each team participating in the Autodesk Award competition will receive a videotape of Entries submitted in 1999.

5.4 Entry Requirements

- Entrant must be a fully-registered team participating in 1999 FIRST Robotics Competition.
- Entry must include a storyboard and not more than 30-seconds (maximum) of animation created using Autodesk® software. See Entry Specifications for all requirements in detail.
- Limit one (1) Entry per school.
- Entry must include both a completed Entry Form and a completed Autodesk Archive Consent and Release Authorization Form. Both forms are found in the 1999 Competition Manual and on the FIRST website; both must accompany your Entry in hard copy format.
- **Entry Deadline: 5:00 PM, March 15, 1999.** All Entries (regardless of preferred shipping method) must be received at Autodesk, Inc. not later than 5:00 PM on Monday, March 15, 1999. Entries will not be accepted for judging after the deadline. Autodesk is not responsible for Entries not delivered to Autodesk's San Rafael, CA, office by the deadline, nor for any lost, late, misdirected, illegible, incomplete, or damaged Entries.

Entry Specifications Checklist—Entries not meeting the requirements of this checklist will not be judged. Check your submittal to ensure it meets the following specifications:

- Includes hard copy of your original storyboard in 8½ -by- 11-inch format and a total of not more than six (6) pages. Use #3 pencil or softer. (Color may be used on the original but is not required.)
- Includes not more than 30-seconds (maximum) of animation *not including credits*. (Credits, if any, for individual contributors may follow the 30-second animation, but will not be included as part of the judging/scoring process.)
- To ensure judges accurately record timing, Entry must:**
 - Open and hold briefly on a still frame of the Entry title; Team names and number; School name(s), and Sponsor name(s). For example: Some Cool Video, Team Name / #2002 / Tech High School / Sponsor, Inc.
 - Be *not more than* 30 seconds of animation. Timing begins as soon as opening credits clear the screen.
 - End with a still frame image of your robot – which follows the not more than 30 seconds of animation. Credits may follow that still frame, but will not be included as part of the judging/scoring process.
- In 1999, animation may be submitted -ONLY- as VHS videotape.**
- All materials for Entry (including your storyboard) are clearly labeled with the title of the animation, the team number, school name(s), and the corporate sponsor name(s).
- A completed Autodesk Award Entry Form and a signed Autodesk Archive Consent and Release Authorization (AC&R) Form are included.

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Ship Entry to: Autodesk, Inc.
Marketing Support Team—Image Archives
111 McInnis Parkway
San Rafael, CA 94903
Attn.: 1999 Autodesk Award for FIRST

Note: Entries will remain the property of Autodesk, Inc. No hard copies, digital files, videocassettes, or computer disks will be returned.

5.5 Prizes and Prize Rules

The Winner of the 1999 Autodesk Award will be announced during the 1999 FIRST Robotics Competition National Championship Awards Ceremony. The winning animation will be played at the Ceremony, and an Award trophy will be presented to representatives from the winning team. In addition, Autodesk will grant education copies of the latest release of 3D Studio™ MAX to a select group of student animators nominated by the winning team.* Autodesk will also present a framed image from the winning Entry to both the corporate sponsor and school.

Honorable Mention and “Rookie” winners will be acknowledged at the Awards Ceremony. These three winning animations also will be played at the Ceremony, and each winning team will be granted one copy of the latest release of 3D Studio™ MAX, to be awarded by that team to a student animator nominated by the team as a key contributor. Should a “rookie” team either win the 1999 Award or receive an “Honorable Mention”, there will be no additional “Rookie” Award presented.

If you have questions regarding these Entry requirements, please contact Laura London at laura.london@autodesk.com.

*Software awards will be shipped directly to individual student contributors following the Competition. Autodesk reserves the right to substitute, at its sole discretion, another prize of equal or greater value for any prize described herein. No part of any prize is transferable. No substitution of prizes is permitted except as expressly provided above.

Autodesk, the Autodesk logo, Mechanical Desktop and 3D Studio MAX are registered trademarks of Autodesk, Inc., in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders.

**1995 Chairman's Award Winner
Team 151
Lockheed Sanders &
Nashua High School**

6. AUTODESK DESIGN YOUR FUTURE AWARD

SPONSORED BY AUTODESK, INC.

1999 GUIDELINES

This award is determined by a special Autodesk judging panel prior to the National Championship. See Awards Appendix A: Entry Forms, for the FIRST/*Design Your Future* Award entry form.

6.1 Description

In an effort to inspire more young women to explore and experience the creativity, productivity and sense of satisfaction that comes from participating in The 1999 FIRST Robotics Competition, Autodesk, Inc. sponsors the FIRST/*Design Your Future* Award. Autodesk intends that this Award will both support the overall mission and vision of the FIRST Foundation and will encourage education institutions participating in the FIRST Robotics Competition to actively recruit young women to join their teams.

The Award is one aspect of a larger initiative developed by Autodesk called "*Design Your Future: Math, Science and Technology for Girls*". Introduced in 1997 by Autodesk CEO and Chairman Carol Bartz, the mission of the initiative is to provide practical, inspiring, hands-on opportunities that help girls become aware of, explore and pursue careers in math, science and technology.

6.2 Submission Requirements/Deadline

Open to all teams participating in The 1999 FIRST Robotics Competition, Autodesk's FIRST/*Design Your Future* Award will be presented to a woman high school student and her school:

- A recognition award in the form of an internship at the FIRST Foundation will be presented to the winning student. To cover all costs associated with the internship, Autodesk will make a \$2,500 contribution to FIRST. That contribution will enable the winner to design and participate in a Summer 1999 internship program at FIRST Place in Manchester, New Hampshire. The winner will have all transportation and out-of-pocket expenses paid through FIRST Place. She will live with a host family selected through the FIRST Foundation. The winning student will have agreed to participate in the FIRST intern program and to submit a report upon completion of her internship.

- A cash award of \$5,000 will be made to the school that nominated the winning student. As part of its application for this award, the winning school will have agreed to use this cash prize expressly to encourage more young women to participate in the FIRST Competition. The school will have provided an outline of how the award funds will be used and will have agreed to submit a report evaluating the success of the program. The funds can be used in a variety of ways: training for women teachers and girls to learn about technology and FIRST, fees for speakers and/or consultants to conduct teambuilding exercises for girls and women teachers and engineers, recruiting materials tailored to attracting girls to the program, etc. The only restriction is that the funds be used expressly to encourage young women to participate in the FIRST Competition.

In an effort to broaden enthusiasm for attracting girls to FIRST, in 1999 Autodesk will acknowledge two “Honorable Mention” award-winning young women. Each of the two high schools sponsoring these young women will receive a cash award of \$2,500 enabling them to recruit more young women of high caliber to the FIRST Competition.

Each high school participating in The 1999 FIRST Robotics Competition may nominate one woman student from their high school to qualify to win the Award. Teams with more than one high school may submit one entry per high school. Award ballots will be available both in the 1999 Competition Manual and on the FIRST website.

The nominee does not need to be a team captain, nor a “driver”; however, her contribution to her team success should be significant. Also, Autodesk is seeking to reward girls who may not have been attracted to science, math, technology, or engineering – but have learned through their Competition experience that there is challenge, reward, and fun involved in practical design and collaborative problem solving.

Deadline:

To be considered for the Award, all ballots must be received by Autodesk, Inc. *in hard copy only* no later than April 1, 1999.

6.3 Judging Criteria

The Award recipient will be selected by a team of judges who will score ballots according to criteria which include the following:

- Degree to which the student essay is well-thought out, complete and clearly articulated
- Degree to which specifics are included in the student essay
- Degree to which the student essay is genuine and personal
- Degree to which a “student voice” is heard
- Creativity and originality in expression
- Degree to which the school essay describes a supportive environment
- Degree to which the nominee’s unique contribution is described
- Degree to which the school clearly articulates current and future efforts to involve girls in the FIRST Competition

6.4 Award Presentation

The Award will be announced by an Autodesk representative at the National Championship Awards Ceremony at Epcot, WALT DISNEY WORLD. A press release covering the announcement will be developed and distributed by Autodesk.

7. DANIEL WEBSTER COLLEGE SCHOLARSHIP

In partnership, FIRST and Daniel Webster College have established a scholarship to benefit a deserving student who has participated on a FIRST team during his or her high school years and who would like to attend Daniel Webster College. The student may enroll in any course of study at Daniel Webster College.

7.1 Description

Daniel Webster College will award a merit scholarship in the amount of \$7500 per year for four years to a student who has been a member of a FIRST team at any high school. The student must meet the regular academic requirements for admission as written in the college catalogue, as well as meeting requirements for scholarship retention. This scholarship is a merit scholarship. The recipient will not be eligible for additional merit scholarship awards from Daniel Webster College, but the student may apply for need-based financial aid.

Daniel Webster College's project-oriented curriculums combine theory and application. Students who do well here have a can-do attitude, are willing to take the initiative to lead their teams in project work, and have a commitment to excel in the classroom.

7.2 Submission Requirements/Deadline

To apply for the 1999 Daniel Webster College - FIRST Scholarship,

- Submit a detailed resume highlighting your leadership and technical skills and potential.
- Submit a recommendation from an adult leader on your FIRST team.
- Submit a 500-word essay on your reactions to one of the following three quotes:
“Leaders lead by example. They know how to set aggressive but achievable goals. They know the difference between desirable pressure and undesirable stress. And they know how to create an environment where people work hard because they enjoy what they are doing” – Unknown
“The most important thing is to keep the most important thing the most important thing.” – Stephen Covey
“Remember, the FIRST competition is not about building a robot, it's about building a team.” - Vincent Wilczynski
- Complete a Daniel Webster College Admissions Application packet. The \$35.00 application fee has been waived.

- **Deadline:**

Submissions must be received no later than March 22, 1999. Please send all submissions to:

Admissions Office
1999 Daniel Webster College -FIRST Scholarship
Daniel Webster College
20 University Drive
Nashua, NH 03063-1300

7.3 About Daniel Webster College

Daniel Webster College awards the B.S. degree in several areas in aviation, business management, sport management, computer science, and information systems. The A.S. degree is awarded in engineering science and aeronautical engineering. The College has transfer agreements in engineering with UNH, UMASS-Lowell, Clarkson University, and Kettering University (formerly GMI).

Viewbook, course catalogue, and application materials may be obtained by contacting: Director of Admissions, Daniel Webster College, 20 University Drive, Nashua, NH 03063-1300. The college's web site address is www.dwc.edu. Telephone (603) 577-6600 or 800-325-6876. The email address is admissions@dwc.edu.

8. DREXEL UNIVERSITY SCHOLARSHIPS

In partnership, Drexel University and FIRST have established eight merit scholarships for high school juniors. These scholarships will benefit deserving junior students who are actively involved on a competing on a FIRST team during his or her junior high school year and who would like to attend Drexel University. The students may enroll in a full time undergraduate program of study at Drexel University.

8.1 Description

Drexel University will award a merit scholarship in the amount of \$5,000 per year of attendance to eight junior students who are actively a member of a FIRST team at any high school. The winners will be announced at the National Championship in April 1999. Each junior student who applies for the scholarship must meet the regular academic requirements for admission as well as meeting requirements for scholarship retention. These scholarships are merit scholarships. The recipients will not be eligible for additional merit scholarships from Drexel University, however the student may apply for need-based financial aid.

8.2 Submission Requirements/Deadlines

To apply for one of the eight Drexel University 1999 scholarships:

- Complete a Drexel University Undergraduate Admissions Application packet. The \$35.00 application fee will be waived.
- Submit a detailed resume highlighting your leadership and technical skills and potential.
- Submit a recommendation from an adult leader on your FIRST team.

Admission applications may be obtained from the undergraduate admissions office at the address below. Completed applications and scholarship submissions must be received no later than March 1, 1999. Please send submissions to:

Drexel University
1999 Drexel University-FIRST Scholarship
Undergraduate Admissions
3142 Chestnut Street
Philadelphia, PA 19104
Telephone: 800-2-DREXEL
E-mail: Enroll@drexel.edu
Website: www.drexel.edu

8.3 About Drexel University

Drexel University is a national leader in curricular innovation and co-operative education with a strong technological focus. Through Drexel Co-op: “The Ultimate Internship”® students alternate between periods of classroom study and paid professional employment, gaining experience needed to pursue the graduate school or career of their choice. At Drexel, students can earn a B.A., B.S., M.S., M.B.A., and Ph.D. in one of five colleges and three schools including Arts and Sciences; Business and Administration; Design Arts; Engineering; Information Science and Technology; Biomedical Engineering; Science & Health Systems; Education; and Environmental Science, Engineering and Policy. Most recently, Drexel has forged an alliance with MCP Hahnemann University, which offers the prestigious MCP Hahnemann University School of Medicine, along with three schools in nursing, health professions and public health. Thanks to Drexel’s Philadelphia location, the University offers its students all of the benefits of a major metropolitan area and corporate center.

9. KETTERING UNIVERSITY SCHOLARSHIPS

9.1 Description

In partnership with FIRST, Kettering University will be offering two \$5,000 non-renewable, merit-based scholarships. Scholarship applicants must be high school seniors who are actively involved on a competing FIRST team during their senior year of high school, and who would like to attend Kettering University. Recipients may enroll in any course of study at the university.

9.2 Submission Requirements/Deadline

Students must meet the regular admission criteria for the university and must be admitted to the university to be considered for the scholarship. Two letters of recommendations are required, at least one must be from an adult leader on the applicant's FIRST team. An essay must also be included which describes the applicant's involvement in the FIRST program and what the experience meant. The winners will be announced at the National Championship in April 1999.

Deadline:

The scholarship application deadline is March 1, 1999. Applications for the scholarship are available from the Kettering University Office of Financial Aid. Applications for admission are available through the Office of Admissions. Both offices can be contacted at 1-800-955-4464 or by mail at: 1700 W. Third Avenue, Flint, MI 48504.

9.3 About Kettering University

Founded: In 1919 by General Motors, independent since 1982. Formerly GMI Engineering & Management Institute, became Kettering University in 1998.

Students: 2,400 Undergraduate students, 20% women, 12% minorities, 46 states and 15 countries represented.

Faculty: More than 130 full-time faculty, 80% with terminal degrees and the majority with significant business/industrial experience.

Academic Program: Majors, leading to Bachelor of Science degrees, offered in Computer, Electrical, Industrial, Manufacturing Systems and Mechanical Engineering; Management; Applied Math; Applied Physics; Environmental Chemistry; and Computer Science.

Minors offered in Applied Chemistry, Applied and Computational Mathematics, Applied Optics, Applied Statistics, Computer Engineering, Computer Science, Electrical Engineering, Environmental Chemistry, International Studies, Liberal Arts Studies, Management and Physics.

Academic/Co-op Calendar: Students alternate 12-week terms of on-campus classroom study with on-the-job work at a co-op employer. Four 12-week terms comprise one academic year.

FIRST and Kettering University constitute a great team! The very important hands-on engineering and technical experiences learned while competing in FIRST are skills that you can build on as an undergraduate student at Kettering University. Kettering students work side by side with engineers and technical experts developing work skills and earning substantial wages to cover a significant part of their educational expenses.

You see, Kettering University is America's premiere cooperative education university. Many of the very companies sponsoring FIRST teams, such as Johnson & Johnson, Delphi Automotive and General Motors, also employ our co-op students for the full five-year program. At graduation, Kettering University students have up to 2 ½ years of corporate experience and a significant start on their careers.

What do most employers demand from applicants? Related experience. Our students gain experience while earning their Bachelor of Science degree! As a student participant in FIRST, you will have an advantage over other Kettering University applicants because of your experiences in FIRST and the association with your sponsor. So....apply now to Kettering University and get your career off to a great start.

Quote from Rebecca Linhorst of Bridgewater, MA, 1998 FIRST participant with Johnson & Johnson and now a co-op student at Kettering University employed at Johnson & Johnson, Southington, CT.

FIRST is exactly the reason I decided to become an engineer and why I should be considered for this scholarship. I went to Johnson & Johnson many nights, working hand in hand with engineers to build a fully functional robot that would be ready to compete in six weeks. By doing this I developed an almost feverish desire to become an engineer!

10. WPI DESIGN INNOVATION SCHOLARSHIP

10.1 Description

FIRST and Worcester Polytechnic Institute (WPI) are proud to once again announce a bold step for The 1999 FIRST Robotics Competition. This year, WPI and FIRST will award a full four-year undergraduate scholarship to one of the FIRST student participants to attend WPI.

With this WPI Design Innovation Scholarship, FIRST continues on with an academic strategic alliance to provide FIRST participants with not only an introduction to math, science, technology, and engineering, but an opportunity to pursue studies, gain experience, and choose a career in these exciting fields.

One of FIRST's main goals is to show today's kids that it is important to be smart and profitable to use your brain. The addition of this \$75,000 scholarship to WPI is one more way in which WPI and FIRST will show today's students that science and technology can be fun and rewarding.

10.2 Submission Requirements/Deadline

All teams participating in The 1999 FIRST Robotics Competition will qualify for the WPI Design Innovation Scholarship. The winning team will be selected through a vote conducted by all of the teams. Each team will receive one ballot containing five criteria with which they must select a first (50 points), second (25 points), and third (10 points) place candidate other than their own team. The criteria includes: (1) the robot with the most innovative design, (2) the team that thrives in a partnership or teamwork atmosphere, (3) the team whose student participants demonstrate enthusiasm for engineering and science, (4) the team displaying the best sportsmanship, and, (5) the best team spirit.

Deadline:

All votes must be submitted to FIRST at any regional competition or to the WPI information table, located in the pits at EPCOT, by Saturday, 24 April 1999. The scholarship award will be presented to the team who receives the most points.

Once the winning team has been selected, the scholarship award will be made to an individual student designated by the corporate member and school of the winning team.

The student selected for the scholarship may be from any grade level and must have demonstrated enthusiasm for engineering and science and possess the ability and innovation necessary to excel as an engineer or scientist. WPI's project-based curriculum is well suited to students with demonstrated ability to take responsibility to thrive in the team environment, to solve problems and to assume leadership; in short, the same characteristics for success in FIRST. The winning student must also meet WPI's admission requirements and must maintain satisfactory academic progress at WPI to maintain the award. Ultimately, the student selected for the WPI Design Innovation Scholarship should exemplify the spirit of the FIRST program.

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FIRST would like to congratulate WPI for blazing a trail for other academic institutions to follow. FIRST and WPI remain committed to introducing today's students to the many rewards that science and technology offer. This scholarship will provide a student with the opportunity to obtain an undergraduate degree as a result of their participation and effort in the FIRST program. More importantly, it highlights a key role academic institutions can play in continuing the demand for excellence in science and technology created through the student, teacher, academic institution and corporation partnership.

APPENDIX A: ENTRY FORMS

Entry forms for the Autodesk awards and the WPI scholarship are on the following pages. Entry information for any of the other awards or scholarships is located in the associated paragraph of this section.



EXCELLENCE IN ENGINEERING

Information provided on this **Entry Form is required** and will be used in preparation of awards. Please record information as you wish it to appear. Please read the Entry Requirements and Specifications carefully before completing this Entry Form.

Entry Deadline: Must be received at Autodesk no later than 5:00 PM, March 15, 1999 (regardless of shipping method).

Entrant information [Please print.]

FIRST Team Name & Number: _____ Autodesk Award Entry Title: _____

School Name(s): _____

School Contact (Teacher): _____ Telephone and e-mail: _____

Sponsor Company Name(s): _____

Sponsor Contact: _____ Telephone and e-mail: _____

Individual student animator(s):

Your team can select up to 5 individual student animators as potential Award recipients. List the information requested about those students below. We want to acknowledge all other student contributors on your Autodesk Award team (including storyboard, modeling, sound effects, etc.), so please list any other contributors and attach that list to this Entry Form on a separate sheet.

Student Animator	Current Address	City, State, ZIP	Telephone
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Individual Team Champion

In past competitions for the Autodesk Award, we've heard impressive stories of outstanding individuals on some competing teams. Please tell us who your "Team Champion" is this year and about his/her contribution to the team and your Entry. Your champion may be a student, teacher, engineer, community member, or other individual contributor.

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Software Use—Describe how you used Autodesk software. Also, briefly name and describe how you used other design, visualization, or animation software products.

The Autodesk Archive Consent and Release Authorization agreement on the back of this form MUST be completed and included with your Entry.

ARCHIVE CONSENT AND RELEASE AUTHORIZATION for the Autodesk Award at FIRST—The Competition 1999

Dear Contributor,

We appreciate your interest in submitting material to Autodesk, Inc. The following allows us to legally use your work.

- By signing and returning this consent form, the individual named below and/or if applicable the individual's employer, middle or high school(s), or corporate or college/university sponsor(s) and individual student, faculty and corporate contributors (hereinafter referred to collectively as the "Entrant") understand that the Entrant is agreeing to the following terms which will govern use of the images, animation, sounds, files and other material (the "Material") described below:
- Entrant grants a nonexclusive, irrevocable, perpetual, worldwide license to Autodesk, Inc. to use the images, animation, sounds and other material contained in the "Material" in any manner it deems appropriate. "Nonexclusive" means that Entrant can allow others to use the Material and that the Entrant retains all rights to the Material other than those specifically granted to Autodesk.
- Autodesk may change, reproduce, distribute, and sublicense the Material to its subsidiaries, affiliates, customers and to third parties granting them the same rights which Autodesk has received.
- Autodesk will try to include the credit line shown below when the Material is used and will also try to require others to whom it grants sublicense to do the same. However, Autodesk and its sublicensees may not always be able to include the credit line or otherwise acknowledge the source of the Material. The compensation the Entrant will receive for agreeing to license the Material will be limited to the exposure the Entrant receives by Autodesk's use and sublicensing of it. No other compensation will be paid. The Entrant agrees that the Entrant will not at any time make any claim for compensation for the rights granted to Autodesk.

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The Entrant represents and warrants that the Material is owned by the Entrant free and clear of any liens or claims of any third party; that the Entrant has a legal right to grant the permission given in the Entry Form and in this Agreement. The Entrant indemnifies and hold Autodesk, its subsidiaries, associated companies, successors, assigns, agents, and employees harmless against liability should any third party claim that the use of the Material or any part thereof by Autodesk violates any right of such third party. The Material does not include any proprietary information, logos (including the FIRST Foundation logo), or trademarks of any third party.

The authorized signatory for the Entrant is over 18 years old and **either** owns the copyright to the material in these files, **or** has the right to grant this consent on behalf of the owner, **or** knows that the material in these files is in the public domain. This consent does not conflict with any others the Entrant has granted or any other rights to the files.

FIRST TEAM SPONSOR OR SCHOOL (where applicable)

FIRST Team Name and Number: _____ **Autodesk Entry Title:** _____

Sponsor or School Name: _____ **Authorized Signatory (print):** _____

Address: _____ **Name:** _____

Title: _____

City, State, ZIP: _____ **Date:** _____

Country: _____ **Telephone #:** () _____

Email: _____ **Fax #:** () _____

Authorized Signature(s): _____

The above release shall be void if amended in any manner. Autodesk shall not be responsible for the return of any files submitted.



FIRST/DESIGN YOUR FUTURE

1999 OFFICIAL BALLOT

Autodesk, Inc. offers all high schools participating in The 1999 FIRST Robotics Competition an opportunity nominate a young woman student from their school for the Autodesk FIRST *Design Your Future* Award. Refer to Award guidelines found both in the 1999 FIRST Competition Manual and on the FIRST website.

Ballot Entry Deadline: To be considered for the Award, all completed ballots *must be received in hardcopy only* by Autodesk, Inc. no later than 5:00 PM, Thursday April 1, 1999. Send ballots to Autodesk, Inc., Education Department, 111 McInnis Parkway, San Rafael, CA 94903, Attn:Laura London. No ballots will be accepted via email.

Please print your responses to the following (sign where appropriate):

FIRST Team Number: _____

Award nominee (Please print.): _____

School Name: _____

School Address: _____

Corporate Sponsor Name(s): _____

Student Nominee(signature): _____

(print): _____

School Representative (signature): _____

(print): _____

(phone/email) _____

To be completed by the student nominee: (Please attach your typed response.)

1. How did you get involved in The 1999 FIRST Competition, what role did you play on the team, and what did you do to advance your team's chances of success? (100 – 150 words)
2. Describe how your experience in The Competition has helped change or further develop your ideas for your future education and your career? (100 – 150 words)
3. Share what you learned about yourself through working with your teammates – students, teachers, engineers, corporate sponsors, your community. (75-100 words)

To be completed by the nominated student's school: (Please attach your typed response.)

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Explain why your team chose to nominate this young woman. Also explain how Award funds will be used. (200 words)

By signing this Official Ballot, both student and school agree to abide by Award Guidelines should they win the Award.

SAMPLE BALLOT

(To be handed out at The Competitions)

WPI Design Innovation Scholarship Award

Ballot for Team # _____

Criteria for the WPI Design Innovation Scholarship:

- 1. Robot with the most innovative design*
- 2. Team that thrives in a partnership or teamwork atmosphere*
- 3. Team whose student participants demonstrate enthusiasm for engineering and science*
- 4. Team displaying the best sportsmanship*
- 5. Best team spirit.*

Vote for First Place Team: _____
(50 Points) (TEAM NAME) (ROBOT NAME)

Vote for Second Place Team: _____
(25 Points) (TEAM NAME) (ROBOT NAME)

Vote for Third Place Team: _____
(10 Points) (TEAM NAME) (ROBOT NAME)

Please submit your ballot to FIRST at any Regional Competition and to the WPI information table, located in the pits, at Epcot by Saturday, April 24, 1999.

(STUDENT OR SCHOOL REPRESENTATIVE) (PHONE NO.)

(SPONSOR REPRESENTATIVE) (PHONE NO.)