



What's New: National Student Competition

- Essays are to be submitted electronically by emailing to secme@coe.gatech.edu
- **Banner Competition.** The winning State/Regional design team's SECME program will design a banner for competing in the Banner Competition at the National Competition Finals. The three-member design team will bring the banner for competition to the National Competition Finals. A trophy for the school will be the award prize for 1st, 2nd and 3rd place winners
- If the Member University/School system would like to send an additional chaperone*, SECME National Office is to be notified by **May 1, 2008**. In addition to the roundtrip transportation cost, **the Member University is responsible to SECME National for payment to cover housing and meals for the additional chaperone.**
- SECME National **MUST be notified by May 1, 2008, if parents and/or other family members of individual competing team members would like to stay on campus* during the competition events.** SECME will offer housing accommodations at their discounted rate. Payment will be made in advance to SECME National. If the Host University is unable to provide additional bed space, parents and/or family members will be responsible for securing their own housing accommodations during the competition.

**If host university has available bed space*



2007-2008 National Student Competition

“SECME: Lighting The Torch To Empower Future Leaders”

1. **Engineering Design**¹ [Team entry: 3 students required]
 - a. Mousetrap Car Construction and Run
 - b. Design Drawing of Mousetrap Car
 - c. Technical Report on Mousetrap Car
 - d. Team Interview with Judges
2. **Essay** [Individual entry: 1 student]
3. **Poster** [Individual entry: 1 student]

PLEASE READ AND FOLLOW CAREFULLY ALL 2007-08 COMPETITION GUIDELINES

- ❑ Procedures and Guidelines as posted at www.secme.org apply to all levels of competition—school/school district, state/regional, national.
- ❑ Elementary, Middle/Junior High, and High School students each will compete only with other students at their respective levels.
- ❑ Eligibility Requirements: 2007-08 Data must be submitted electronically to the SECME National Office prior to your State/Regional Competition.
- ❑ Only first-place winners certified by the SECME Member University that hosts or sponsors a qualifying state/regional competition, and who are authorized by the SECME National Office, will be eligible to compete in the National Competition Finals.
- ❑ **Deadline is Friday, April 4, 2008**, for forms certifying state/regional winners in the Engineering Design, Essay, and Poster competitions—and for the original winning posters and essays—to arrive at SECME’s National Office (on the campus of GA Tech, 151 6th Street, NW, Atlanta, GA 30332-0270).

¹ The winning State/Regional Design Teams will design a School Banner for competing at the National Competition Finals. We encourage inclusion of your other SECME students in the creation of this competition entry.

2007-08 SECME NATIONAL COMPETITION DATES AND DEADLINES

<u>April 4, 2008</u>	State/Regional Winner Certification Forms ² and Originals of First Place Winning Essays and Posters <u>Due At SECME's National Office</u>
<u>April 21, 2008</u>	Judging of National Essay and Poster Finalists Completed
<u>May 5, 2008</u>	National Essay and Poster winners notified

The 2008 Engineering Design National Student Competition Finals will be held at the historic Tuskegee University, Tuskegee, AL. Dates and logistical details will be posted at a later date.

² Certification Forms can be submitted anytime after the completion of your state/regional competition

2007-08 SECME National Student Competition Program Description and Theme

- ❑ **Engineering Design** (Mousetrap Car Construction and Run, together with Design Drawing, Technical Report, and Team Interview with Judges) – Three-Member Teams of **Middle- and High-School** Students.....*Guidelines – Pgs 7-17*
- ❑ **Essay** (on 2008 Theme) – Individual Student Entries at the **Elementary, Middle/Junior High, and High-School** Levels..... *Guidelines – Pgs 18-19*
- ❑ **Poster** (on 2008 Theme) – Individual Student Entries at the **Elementary, Middle/Junior High, and High-School** Levels..... *Guidelines – Pgs 20-21*
- ❑ **Banner** – School entry only: Winning Three-Member State/Regional Design Teams compete at the National Competition Finals..... *Guidelines – Pgs 22-23*
- ❑ **Judges Reporting Forms**..... *Pgs 25-28*
- ❑ **Grievance Form** *Pg 30*
- ❑ **Certification of Winner Form**..... *Pg 31*

This year's National Competition theme, "**SECME: Lighting The Torch To Empower Future Leaders,**" is a **required element that must appear in ALL Essay and Poster entries.**

The 2007-08 theme reflects SECME's global mission and purpose—to increase the pool of historically under-represented, under-served, and differently-abled students who will be prepared to *enter* and *complete* post-secondary studies in science, technology, engineering, and mathematics, thus creating a diverse and globally competitive workforce. The measure of that accomplishment is a student's academic and career success.

SECME Program Directors and School Coordinators are asked to distribute (or reference) these Procedures and Guidelines to *all* educators, parents, and business/industry partners who will help prepare students for this year's competition program or serve as mentors or judges.

Complete competition information is posted on SECME's web site, www.secme.org (under "Downloads," see "Competition Procedures and Guidelines"). Check the web for the latest, most comprehensive details and guidelines on this year's national competition program and schedule.

For further information or guidance on technical questions, contact: 1) the Engineering Faculty Consultant or Minority Engineering Program Director at the Member University which sponsors your state/regional competition; or 2) the Competition Consultant at SECME's National Office--1-888-262-8307 (toll-free) or by e-mail at secme@coe.gatech.edu.

All Certification of Winners' forms and originals of winning Posters and Essays must be received at SECME's National Office not later than Friday, April 4, 2008, for those individuals and teams to be eligible for the National Competition Finals.

GENERAL INFORMATION

1. Be sure to **read and follow all rules and guidelines carefully and explicitly.**
2. Be sure to **adhere to all deadlines.**
3. **Only first-place winners** of state/regional competitions hosted or conducted by a SECME Member University are eligible to **advance to the National Competition Finals.** The university sponsor will certify winners in each competition to SECME's National Office. **No team or entry will be accepted for the National Finals without this certification.**
4. **All levels (Elem/Middle and High School) are eligible to compete in the Essay and Poster Competitions.** Elementary winners will NOT travel to National Finals.

2007-08 SECME NATIONAL STUDENT COMPETITION PROCEDURES AND GUIDELINES

- 1) All levels of competition—School/School District, State/Regional, and National—are required to follow the Procedures and Guidelines as set forth here.
- 2) Only teams (Mousetrap Car) and individuals (Poster and Essay) that are first-place winners in a state/regional competition hosted or sponsored by a SECME Member University will be qualified and eligible to compete in the National Finals.
- 3) Each SECME school should select a teacher/counselor as its competition coordinator.
- 4) School Coordinators need to review Procedures and Guidelines with their teachers and counselors so that guidance to all students is consistent and accurate.
- 5) Only students active in a local SECME program are eligible to enter competitions.
- 6) All entries are expected to be neat, original, and **completed by the students.**
- 7) Judging for school competitions should be coordinated with the SECME Member University state/regional competition coordinator to ensure that procedures and guidelines are consistent from one level of competition to the next.
- 8) Each school identifies its first place team in the four-part Engineering Design Competition (Mousetrap Car Construction and Run, Design Drawing, Technical Report, and Team Interview with Judges) as well as first place Essay and Poster winners to go on to the state/regional competition hosted or sponsored by a SECME Member University.
- 9) Elementary students are eligible for the Essay and Poster Competitions only, but will not travel to the National Finals to receive their honor.

- 10) SECME school coordinators should identify a chaperone (**one per team**) to accompany their state/regional competition first-place Mousetrap Car winners to the site.
- 11) SECME Member Universities that host or sponsor a state/regional competition are to:
 - a. Certify to the National Office by **Friday, April 4, 2008**, their first-place winning team(s) (Middle/Junior High and High School) in Engineering Design (Mousetrap Car) Competition who have qualified for the National Finals, to be held during the SECME Summer Institute at Tuskegee University.
 - b. Certify their first-place Essay and Poster competition winners at the Elementary, Middle/Junior High, and High School levels. Original posters must be mailed to the National SECME Office. Original Essay must be submitted electronically to the SECME National Office for judging (secme@coe.gatech.edu). All entries must arrive not later than **Friday, April 4, 2008**. (**Entries will be judged and national winners notified and posted on May 5, 2008.**)
- 12) All National Poster Entrants will be displayed during the Celebration of Student Success at the Annual Summer Institute. All National Essay winners will be displayed on the SECME web site at www.secme.org.
- 13) Financial responsibilities for the SECME Student Competition are as follows:
 - a. SCHOOLS/SCHOOL DISTRICTS

Responsible for covering all expenses involved in conducting contests at the school/school district level.
 - b. MEMBER UNIVERSITIES

Responsible for:

 - 1) all expenses of conducting state/regional contests (including awards);
 - 2) round-trip travel, including ground transportation, to National Finals at the 2008 Summer Institute for six top winners (1st place High School Engineering Design team of **three** and 1st place Middle/Junior High team of **three**), plus **one chaperone per team**.
 - 3) **If the Member University/School system would like to send an additional chaperone, SECME National Office is to be notified ASAP. In addition to the roundtrip transportation cost, the Member University is responsible to SECME National for payment for housing and meals for the additional chaperone.**³
 - 4) SECME National MUST be notified by May 1, 2008, if parents and/or other family members of individual competing team members would like to stay on campus during the competition events. SECME will offer housing

³ If Host University has available bed space.

accommodations at their discounted rate⁴. If the Host University is unable to provide additional bed space, parents and/or family members will be responsible for securing their own housing accommodations during the competition.

c. Host University for National Competition Finals

Is responsible for:

- Meals and lodging for National Competition Finalists at Summer Institute site, i.e., first-place winners of state/regional contests
- Cash prizes, trophies, and awards to winners of the National Competition Finals (Mousetrap Car Team – individual members; Poster, Essay individual winners and Banner competition – school award)

⁴ *If Host University has available bed space.*

2008 SECME STUDENT AWARDS FOR NATIONAL FINALS COMPETITION

Winners in SECME's 2007-08 National Student Competition will receive cash prizes as shown below along with certificates, trophies and medallions. Winning posters will be professionally framed and winning essays will be professionally bound. Awards will be presented at the Celebration of Student Success ceremony following the Engineering Design Competition National Finals. All Essay/Poster Awards will be mailed to the winners' home address. If award packages and/or Posters/Essays are returned by the Post Office to the SECME National Office, the parent will bare the cost for reshipment.

Competition Categories and Levels	Middle School/ <u>Junior High</u>	High <u>School</u>
<u>ENGINEERING DESIGN</u> Mousetrap Car (construction and run), Design Drawing of Mousetrap Car, Technical Report on Mousetrap Car, and Team Interview with Judges)		
First Place Team (3 members)	\$100/Member	\$300/Member
Second Place Team (3 Members)	\$ 75/Member	\$225/Member
Third Place Team (3 Members)	\$ 50/Member	\$150/Member
<u>ESSAY</u>		
First Place Winner (1 student)	\$100*	\$300
<u>POSTER</u>		
First Place Winner (1 student)	\$100*	\$300
<u>BANNER</u> – The Banner Competition at the National Student Competition Finals is not divisional. There will be a 1 st , 2 nd and 3 rd place winner and the award will be a Trophy for the school.		
First Place Winner (School)		
Second Place Winner (School)		
Third Place Winner (School)		

*First-place winner at Elementary level also will receive \$100 cash prize.

GUIDELINES FOR 2008 SECME ENGINEERING DESIGN COMPETITION (MOUSETRAP CAR: CONSTRUCTION AND OPERATION)

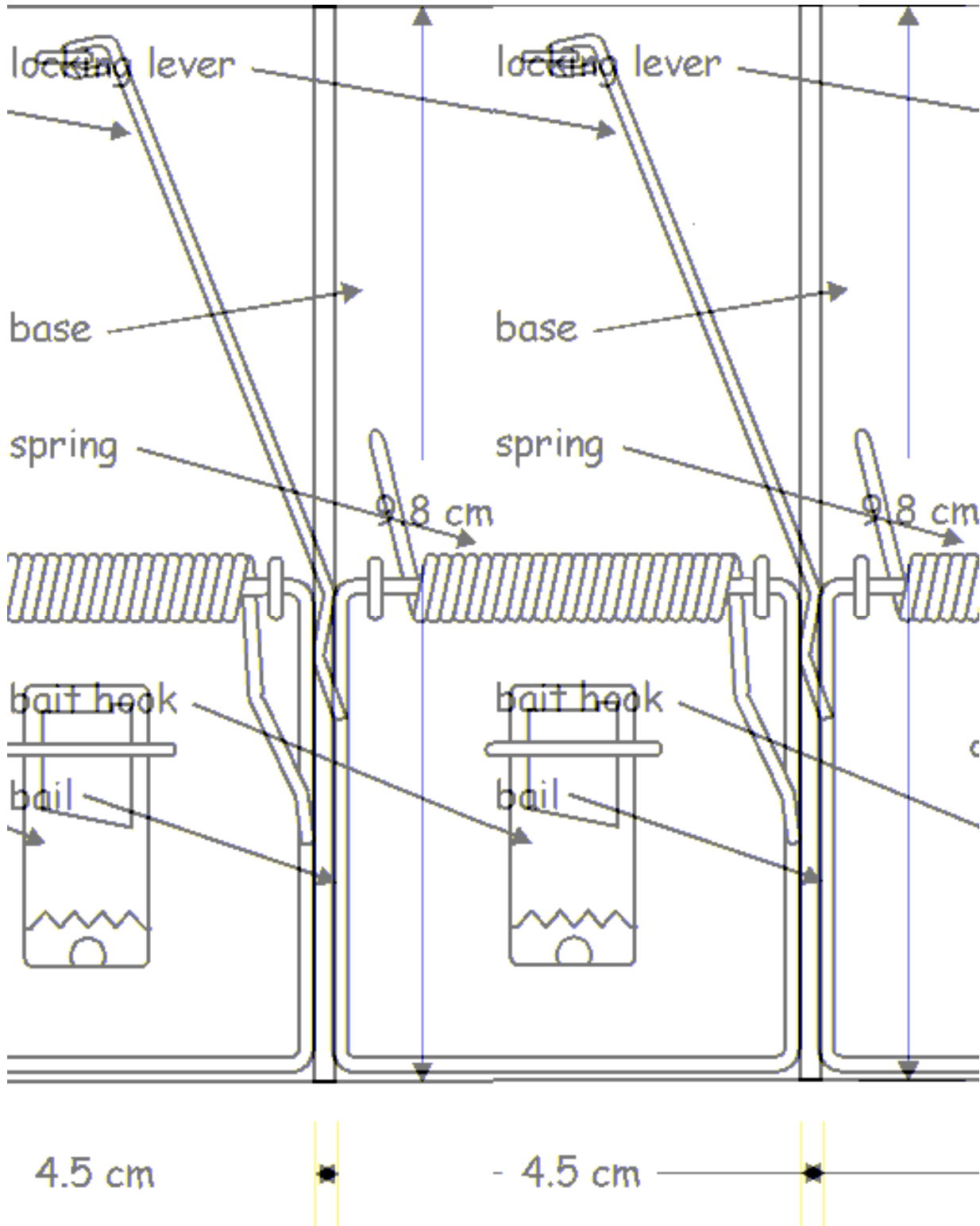
ENGINEERING DESIGN COMPETITION REQUIREMENTS:

(Any entry not meeting the following requirements will be disqualified.)

1. The Engineering Design Competition **requires participation in each of these four areas:**
 - a. Mousetrap Car Construction and Run
 - b. Design Drawing of Mousetrap Car
 - c. Technical Report on Mousetrap Car
 - d. Team Interview with Judges
2. This is a **team competition** and should reflect the coordinated efforts of all members.
3. **Three (3) students must be on each team.** Members must remain the same at all levels of competition (school, state/regional, and national finals).
4. Each team member is expected to be able to serve as a spokesperson and be fully involved with all aspects of the entry.
5. **A standard mousetrap**--usually about 4.5 X 10 centimeters and weighing about 25 grams--**must be used to build the car.**
6. Components of the mousetrap are: base (on which other components are mounted), spring, bail, locking lever, and bait hook (see component sketch on next page).
7. The mousetrap spring must be the sole source of power. **(You may NOT use rubber bands, CO₂ boosters, or any other agent or element for extra power).**
8. **In design and construction of the car, the original mousetrap spring and wood base MUST remain intact.** These two components may **NOT** be cut or altered in any way—physically, chemically, or thermally. **Only the locking lever and bait holder may be removed from the base, if desired. The bail may be straightened but NOT cut (shortened), added on to, or reinforced. It must remain as a component of the completed car.**
9. The spring must be visible and/or accessible to the judges for inspection.
10. The car must have a minimum of three wheels and can be made as long or short as desired as long as requirement #8 above is met.
11. Cars will be tested on a smooth flat surface. **Distance is measured from the starting line to the farthest point of travel, utilizing a straight line to connect the two points.**
12. **There will be two runs for each car; the better run will be used for final scoring of the mousetrap car's performance.**

(Note: See the page after the mousetrap sketch for Guidelines 13-15.)

Reference Sketch of Original Mousetrap with Component Identifications



13. Two formulas are used to calculate the Performance score for the car run:

$$N = \left(\frac{w}{W}\right) X \left(\frac{D}{L}\right)^2 \quad \text{and} \quad F = \frac{N}{N_L} X 100$$

where:

N...is the score.

To ensure that cars actually perform and not just be small and light,

N=0 if D is LESS than 300 centimeters (for middle school/junior high teams)

N=0 if D is LESS than 600 centimeters (for high school teams)

w...is the mass of the original mousetrap (always taken as 25 grams). NOTE: At all competitions, this standard value will be used in calculating the Performance score.

W...is the total mass of the completed car in grams.

D...is distance measured in a straight line from the starting point to the stopping point in centimeters. D=2,500 if the car travels 2,500 centimeters or more.

L...is the car's longest measurement along one of the three basic dimensions—length, width, or height—in centimeters, measured with the bail extended or retracted, whichever is greater.*

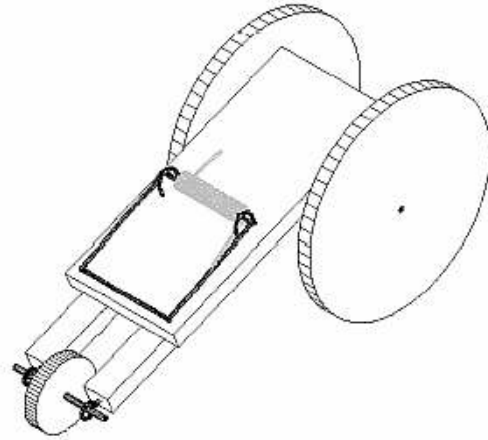
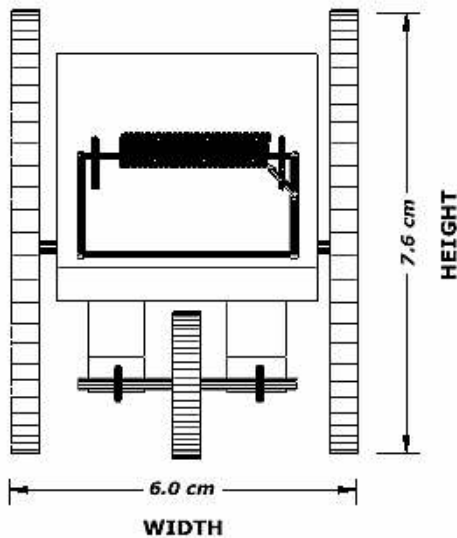
N_L...is the highest Performance score at the competition site.

F...is the final Performance score (to be combined with scores for the Design Drawing, Technical Report, and Team Interview).

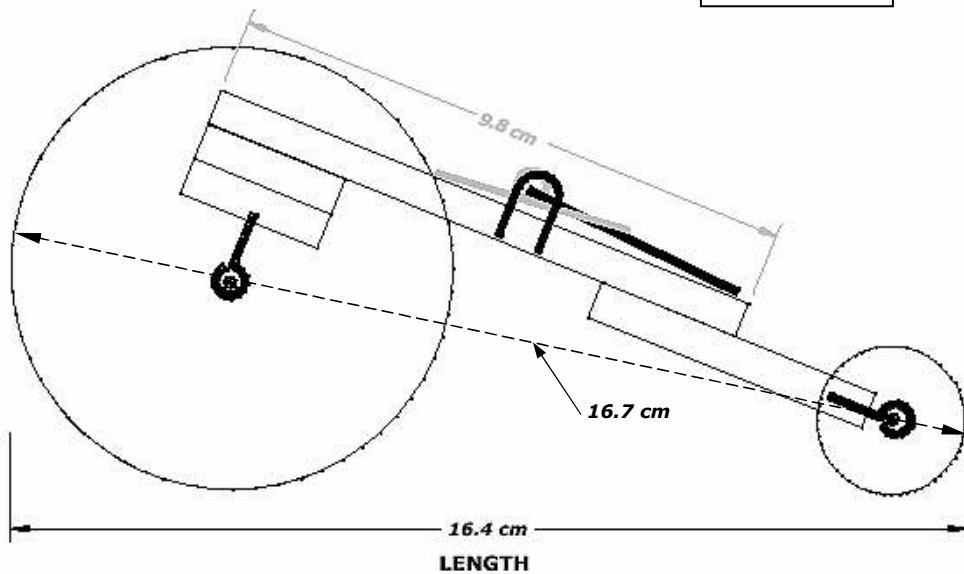
**Judges will measure "L" (see illustration on following page) and "W" prior to the mousetrap car Performance runs. These measurements, together with "D" (determined by the car's run), are used to calculate "N" in the formula above.*

14. Overall Team Score in competition is sum of: 1) Performance (car run) as calculated above (max. 100 points); 2) Design Drawing (max. 50 points); 3) Technical Report (max. 50 points); and 4) Team Interview (max. 50 points). **Thus the maximum total is 250 points.**
15. See pages that follow for guidelines and evaluation sheets on each component of the Engineering Design (Mousetrap Car) Competition.

Measurement of “L,” the Mousetrap Car’s Longest Dimension In Any Direction—Length, Width, or Height



**SCALE
1.0:1.38**



“L” is the car’s longest measurement along one of the three basic dimensions—length, width, or height—in centimeters, measured with the bail extended or retracted, whichever is greater. The length of the car is defined as the distance from the farthest point at the rear of the car to the farthest point at the front. Likewise, the width of the car is defined as the distance from the farthest point on one side to the furthest point on the other. The height of the car is defined as the distance from the travel surface to the highest point of the car.

L (for this example) = 16.4 cm

**2008 SECME ENGINEERING DESIGN COMPETITION:
MOUSETRAP CAR CONSTRUCTION AND OPERATION
(Evaluation Sheet)**

Please Check: Middle School/Junior High Senior High School

Team Name: _____ School Name: _____

City/State _____

Each: Student Name _____ Grade ____ Age ____

Student Name _____ Grade ____ Age ____

Student Name _____ Grade ____ Age ____

Judge's Name: _____ Date: _____

Distance:

First Run _____ Second Run _____

$$N = \left(\frac{w}{W} \right) X \left(\frac{D}{L} \right)^2$$

$$F = \frac{N}{N_L} X 100$$

w = 25 Grams

W = _____ [Measured weight, in grams]

L = _____ [Longest dimension—length, width, or height—in centimeters]

D = _____ [Maximum D=2,500 if measured distance is more than 2,500 cm]

N = _____ [N=0, if D is LESS than 300 centimeters for middle school teams if D is LESS than 600 centimeters for high school teams]

N_L = _____ [Highest Performance score at competition site]

Mousetrap Car Performance Point Score: F=_____

(Note: F is combined with scores for Design Drawing, Technical Report, and Team Interview to arrive at Overall Team Score in competition.)

2008 SECME ENGINEERING DESIGN COMPETITION GUIDELINES: MOUSETRAP CAR DRAWING

As a part of the Engineering Design Competition, each team is required to prepare a scaled drawing depicting the car that they have designed and built.

MOUSETRAP CAR DRAWING REQUIREMENTS AND GUIDELINES: (Any entry not meeting the following requirements will be automatically disqualified.)

1. The Mousetrap Car Drawing entry is required to illustrate the actual mousetrap car built by the team (photographs and computer generated drawings will NOT be allowed).
2. The size of the engineering paper is required to be the standard 18" X 24" (plain, non-grid, (17-pound vellum) sheet. (Allowing for the required 1" border on all sides, the actual drawing is to cover an exposed area of 16" X 22" of the paper.) **NO MOUNTING, NO FRAMES ALLOWED. BUT DRAWING MAY BE LAMINATED FOR PROTECTION IF DESIRED.**
3. All dimensions are required to be illustrated on the drawing.
4. The scale and the units are required to be indicated on the drawing.
5. The team's Mousetrap Car Drawing is required to show front, side, and top views.
6. All parts of the car are required to be labeled.
7. Ink pens, pencils or markers may be used.
8. A 4" x 6" title legend is to be drawn in the bottom left corner of the drawing inside the 1" border with the following information is required:

Team name

School Name and Address

Team Members' Names, Addresses, and Grade Levels

School Coordinator's Name

Date of Competition

AT ALL COMPETITIONS, THE MOUSETRAP CAR DRAWING WILL BE JUDGED ON:

RESEMBLANCE (Between the actual mousetrap car and drawing)

SCALE

NAMING/LABELING (Of all of the parts used)

APPEARANCE/NEATNESS

2008 SECME ENGINEERING DESIGN COMPETITION GUIDELINES: MOUSETRAP CAR DRAWING (Evaluation Sheet)

Please Check: Middle School/Junior High School High School

Team Name: _____ School Name: _____

City/State: _____

Each: Student Name _____ Grade ____ Age ____

Student Name _____ Grade ____ Age ____

Student Name _____ Grade ____ Age ____

Judge's Name: _____ Date: _____

The drawing is disqualified if any of the following requirements are not met:

Requirements Check: 18" x 24" Engineering Paper 1" Border (All Sides)
 Dimensions 4" x 6" Title legend with required information

The maximum number of points for the Engineering Design Competition Mousetrap Car Drawing is 50. Please score each of the following four categories:

EVALUATION CATEGORIES	POINTS
<p>I. RESEMBLANCE The accuracy to which the Mousetrap Car Drawing illustrates the actual Mousetrap Car designed and built by the team. (1-15 points)</p>	<p>_____</p>
<p>II. SCALE The proportions in the Drawing correctly relate to and represent the team's actual Mousetrap Car. (1-15 points)</p>	<p>_____</p>
<p>III. NAMING/LABELING The correctness of the names/labels of all of the parts in the Drawing of the Mousetrap Car. (1-10 points)</p>	<p>_____</p>
<p>IV. APPEARANCE/NEATNESS The quality of the visual presentation of the Mousetrap Car Drawing entry (1-10 points)</p>	<p>_____</p>
<p>TOTAL (The highest possible score is 50)</p>	<p>_____</p>

2008 SECME ENGINEERING DESIGN COMPETITION GUIDELINES: MOUSETRAP CAR WRITTEN TECHNICAL REPORT

As a part of the Design Competition, the team is required to write a Technical Report describing the design, construction, and operation of the Mousetrap Car. The Technical Report should be a computer printed/typed document, **double-spaced**, on 8½" X 11" white paper with one-inch borders at the top, bottom, and on each side.

Use 12 pt. type in a standard legible text font. **The main body of the report -- 4. Introduction, 5. Design Construction, 6. Construction Procedure, and 7. Operation of the Mousetrap Car--should be a maximum of 5 pages total.** Drawings, sketches, and tables may be included in an Appendix if desired but this is optional and not required. (Entries not meeting these requirements will automatically be disqualified).

TECHNICAL REPORT REQUIREMENTS AND GUIDELINES: (Any entry submitted without a cover page containing all of the required information will automatically be disqualified).

1. COVER PAGE (Required to contain):
 - a. Title of the Technical Report
 - b. Name, addresses, and grades of team members
 - c. Team's school name and address
 - d. School System name
 - e. School Coordinator's name
 - f. Date
2. ABSTRACT One-half to one-page summary of Technical Report.
3. CONTENTS One page
4. INTRODUCTION
5. DESIGN
6. CONSTRUCTION PROCEDURE
7. OPERATION OF THE MOUSETRAP CAR
8. CONCLUSION/RECOMMENDATIONS
9. ACKNOWLEDGMENTS (Optional)
10. APPENDIX (The Appendix may contain sketches, tables, and charts.)

AT ALL COMPETITIONS, THE MOUSETRAP CAR TECHNICAL REPORT WILL BE JUDGED ON:

OUTLINE
ORGANIZATION
PRECISION
SENTENCE FORMATION
MECHANICS

2008 SECME ENGINEERING DESIGN COMPETITION GUIDELINES: MOUSETRAP CAR WRITTEN TECHNICAL REPORT (Evaluation Sheet)

Please Check: Middle School/Junior High High School

Team Name: _____ School Name: _____

City/State _____

Each: Student Name _____ Grade _____ Age _____

Student Name _____ Grade _____ Age _____

Student Name _____ Grade _____ Age _____

Judge's Name: _____ Date: _____

The report is disqualified if any of the following requirements are not met:

Requirements Check: Cover page with required information 12 pt. Type/Standard Font
 Double-spaced Text 1" Borders White paper

The maximum number of points for the Engineering Design Competition Mousetrap Car Technical Report is 50. Please score each of the following five categories:

EVALUATION CATEGORIES	POINTS
<p>I. OUTLINE Structure of Technical Report is complete, correct, and consistent with guidelines. (1-10 points)</p>	_____
<p>II. ORGANIZATION Technical Report follows a logical written description from design to final product. (1-10 points)</p>	_____
<p>III. PRECISION Procedures and steps followed are explained with clarity and exactness (1-10 points)</p>	_____
<p>IV. SENTENCE FORMATION Sentences are complete with appropriate coordination and subordination. (1-10 points)</p>	_____
<p>V. MECHANICS Correct punctuation, capitalization, and spelling are evident throughout report (1-10 points)</p>	_____
<p>TOTAL (The highest possible score is 50 points)</p>	_____

**NOTE: DECISION OF THE JUDGES IS FINAL

2008 SECME ENGINEERING DESIGN COMPETITION GUIDELINES: MOUSETRAP CAR TEAM INTERVIEW WITH JUDGES

As a part of the Engineering Design (Mousetrap Car) Competition, each student team will be interviewed by a panel of judges.

This 5-10 minute discussion will cover details of the car's design and testing as well as the Design Drawing and Technical Report.

TEAM INTERVIEW REQUIREMENTS AND GUIDELINES:

1. Team members are interviewed as a group.
2. Each member is expected to be able to serve as a spokesperson in response to questions from the judges.
3. The team interview will be conducted apart from the car run and scoring of its performance.
4. Interviews normally will take place after judges have received and scored the Design Drawing and Technical Report and completed the inspection and measurements (size, weight) that precede the car's run and scoring of its performance.
5. The team interview will be one element—along with Performance (car run), Design Drawing, and Technical Report—in arriving at the overall score in competition.

AT ALL COMPETITIONS, THE MOUSETRAP CAR TEAM INTERVIEW WILL BE JUDGED ON:

TEAMWORK
APPLICATION OF TECHNICAL PRINCIPLES
KNOWLEDGE OF DESIGN
ORAL COMMUNICATION SKILLS

2008 SECME ENGINEERING DESIGN COMPETITION GUIDELINES: MOUSETRAP CAR TEAM INTERVIEW WITH JUDGES (Evaluation Sheet)

Please Check: Middle School/Junior High High School

Team Name: _____ School Name: _____

City/State: _____

Each: Student Name _____ Grade ____ Age ____

Student Name _____ Grade ____ Age ____

Student Name _____ Grade ____ Age ____

Judge's Name: _____ Date: _____

Requirements Check: All three members present Each responds to questions
 Work is students' own True team effort is evident

The maximum number of points for the Mousetrap Car Team Interview with Judges is 50. Please score each of the following four categories:

EVALUATION CATEGORIES	POINTS
<p>I. TEAMWORK All three members contributed with identifiable individual roles in final products and preparing car to run in competition. (1-10 points)</p>	<p>_____</p>
<p>II. APPLICATION OF TECHNICAL PRINCIPLES Team members analyzed requirements for car to perform and efficient means to transfer energy from spring to propel car (1-10 points)</p>	<p>_____</p>
<p>III. KNOWLEDGE OF DESIGN The design reflects knowledge of the formula used to judge performance and systematic efforts to maximize score (1-20 points)</p>	<p>_____</p>
<p>IV. ORAL COMMUNICATION SKILLS Team members each can speak clearly to the basis for their car's design and how that was applied in construction and testing. (1-10 points)</p>	<p>_____</p>
<p>TOTAL (The highest possible score is 50)</p>	<p>_____</p>

2008 SECME STUDENT ESSAY COMPETITION GUIDELINES

For this year's Essay Competition:

1. Each entry is to be prepared and submitted by an individual student (not a team).

**The 2008 Essay Competition Theme Is:
“SECME: Lighting The Torch To Empower Future Leaders”**

ESSAY COMPETITION REQUIREMENTS: Any entries not meeting these requirements will be automatically disqualified.

I. TITLE PAGE>

- Essay's Title (MUST be this year's theme)
- Student's name, grade, age
- Home address, zip code, and telephone number
- Name of school and address, School System name
- SECME School Coordinator's name
- Date

The title page is to be a computer printed/typed page on 8½" X 11" white paper, double spaced with one inch borders on each side, 12 pt. font size and Times New Roman or CG Times font.

II. ESSAY>

ELEMENTARY 2-3 pages computer printed/typed pages (not including title page) on 8½" X 11" white paper, double spaced with one inch borders on each side, 12 pt. Times New Roman OR CG Times font.

MIDDLE/JUNIOR HIGH ENTRY

3 to 4 neat computer printed/typed pages (not including title page) on 8½" X 11" white paper, double spaced with one inch borders on each side, 12 pt. Times New Roman OR CG Times font.

HIGH SCHOOL ENTRY

4 to 6 neat computer printed/typed pages (not including title page) on 8½" X 11" white paper, double spaced with one inch borders on each side, 12 pt. Times New Roman or CG Times font.

III. BIBLIOGRAPHY>

Reference sources and direct quotations are required to be identified as cited. Bibliography is to be computer printed/typed on 8½" X 11" white paper, double spaced with one inch borders on each side, 12 pt. Times New Roman or CG Times font. (Not included in the required page limit for elementary, middle/junior high, and high school essays)

AT ALL LEVELS OF COMPETITION, ESSAYS WILL BE JUDGED ON:

- ORGANIZATION
- GRAMMAR AND SENTENCE STRUCTURE
- MECHANICS/PUNCTUATION/SPELLING
- CREATIVITY AND STYLE
- RELATIONSHIP TO COMPETITION THEME

The maximum number of points is 100.

NOTE: ALL ENTRIES ARE REQUIRED TO BE COMPUTER PRINTED OR TYPED!!! ALL ENTRIES ARE TO BE SUBMITTED ELECTRONICALLY TO: SECME@COE.GATECH.EDU

2008 SECME STUDENT ESSAY COMPETITION (Evaluation Sheet)

Please Check: Elementary Middle School/Junior High High School

Student Name _____ Grade _____ Age _____

School Name _____

District _____ City/State _____

Judge's Name _____ Date _____

The essay is disqualified if any of the following requirements are not met:

- Requirements Check: Cover page with required information 12 pt / New Times Roman Font
- Double spaced 1" Borders on each side White paper
- Proper number of pages (2-3 for ES, 3-4 for MS, 4-6 for HS)

Maximum number of points is 100. Score each item in a given category as indicated.

ESSAY ORGANIZATION (7 - 45 Points) POINTS

- | | | |
|----|-----------------------------------------------------------------------------------------------------|-------|
| 1. | Clear and precise thesis statement or central idea (1-5 points) | _____ |
| 2. | Effective introduction arousing reader interest and indicating the subject (1-5 points) | _____ |
| 3. | Body of essay contains supporting details related to thesis statement or central idea (1-10 points) | _____ |
| 4. | Clear transitions between paragraphs (1-5 points) | _____ |
| 5. | Logical and coherent essay as a whole (1-10 points) | _____ |
| 6. | Each paragraph adequately developed (1-5 points) | _____ |
| 7. | Satisfying closing (1-5 points) | _____ |

GRAMMAR AND SENTENCE STRUCTURE (3 - 20 Points)

- | | | |
|----|-----------------------------------------------------------------------------------------------------------------|-------|
| 1. | Effective use of subordination and coordination to relate ideas (1-5 points) | _____ |
| 2. | Complete sentences without misplaced sentence parts, sentence fragments, comma splices or run-ons (1-10 points) | _____ |
| 3. | Proper subject/verb agreement and pronoun/antecedent usage (1-5 points) | _____ |

MECHANICS/PUNCTUATION/SPELLING (3 - 20 Points)

- | | | |
|----|----------------------------------------------------------------------|-------|
| 1. | Correct use of punctuation (1-10 points) | _____ |
| 2. | Correct spelling (1-5 points) | _____ |
| 3. | Capitals, underlining, and abbreviations correctly used (1-5 points) | _____ |

CREATIVITY AND STYLE (1 - 10 points) _____

DEMONSTRATES RELATIONSHIP TO COMPETITION THEME (1-5 points) _____

TOTAL (Out of Maximum 100) _____

2008 SECME STUDENT POSTER COMPETITION GUIDELINES

For this year's Poster Competition:

1. Each entry is to be prepared and submitted by an individual student (not a team).

**The 2008 Poster Competition Theme Is:
“SECME: Lighting The Torch To Empower Future Leaders”**

POSTER COMPETITION REQUIREMENTS: (Any entries not meeting these requirements will be automatically disqualified).

I. TITLE CARD>

- 4" x 6" card (taped to back of poster)
- Poster's Title (MUST be this year's Theme)
- Student's name, grade, age
- Home address, zip code and telephone number
- Name of school and address, School System name
- SECME School Coordinator's name
- Date

II. POSTER>

The size of the poster is required to be 22" X 28" (including frame) All posters must be framed in standard 22" X 28" slide-on metal or plastic poster frames. Framed posters are not to use glass. The theme must appear on the poster.

NOTE: Poster must be an original work and may use any medium:

- cut and paste
- hand drawn (paints, charcoal, markers, crayon)
- computer (complete work cannot be generated by computer)
- or any combination of the above

Lamination may be used to protect posters during transport.

(Three Dimensional Posters are NOT ALLOWED).

AT ALL LEVELS OF COMPETITION, POSTERS WILL BE JUDGED ON:

- DESCRIPTION (Physical Facts)
- ANALYSIS (Visual Principles and Unity of Design)
- INTERPRETATION (Meanings and Intention)
- JUDGMENT (Comparison and Response)

The maximum number of points is 100.

2008 SECME STUDENT POSTER COMPETITION (Evaluation Sheet)

Please Check: Elementary Middle School/Junior High High School

Student's Name _____ Grade _____ Age _____

School Name _____

District _____ City/State _____

Judge's Name _____ Date _____

The poster is disqualified if any of the following requirements are not met:

Requirements Check: 4" x 6" Title card with required information Poster size 22" x 28"
 Framed (plastic or metal)

The maximum number of points for a poster is 100.

EVALUATION CATEGORIES

POINTS

- | | | |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| I. | DESCRIPTION (Physical Facts) (2-20 points) | |
| | i. Theme visible and integral to poster design (1-10 points) | _____ |
| | ii. Appearance and craftsmanship, including spelling (1-10 points) | _____ |
| II. | ANALYSIS (Visual Principles and Unity of Design) (3-30 points) | |
| | i. Words and images support each other visually (1-10 points) | _____ |
| | ii. Elements (lines, shape, color, value, texture) are used intentionally
And effectively (1-10 points) | _____ |
| | iii. Visual principles (form, layout, pattern, emphasis, rhythm, contrast,
balance, proportion, variety) combine elements in a pleasing,
appropriate, and effective way (1-10 points) | _____ |
| III. | INTERPRETATION (Meaning and Intention) (3-30 points) | |
| | i. Verbal theme is translated by effective metaphor into visual terms
(1-10 points) | _____ |
| | ii. All points of the theme's concept are illustrated effectively (1-10 points) | _____ |
| | iii. Stylistic use of medium supports the overall work of art (1-10 points) | _____ |
| IV. | JUDGMENT (Comparison and Response) (2-20 points) | |
| | i. This work is more effective than those in its category in visually
carrying out the theme (1-10 points) | _____ |
| | ii. This work appeals to me personally as an isolated work of art
(1-10 points) | _____ |

TOTAL (Highest possible score is 100)

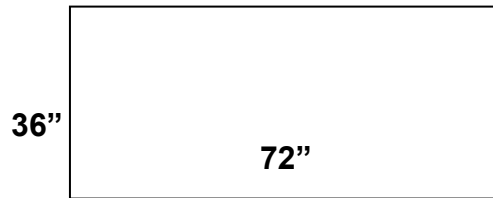
2008 SECME BANNER COMPETITION GUIDELINES

Winning State/Regional Engineering Design Teams will design a school banner for competing in the Banner Competition at the National Competition Finals at the Summer Institute.

BANNER COMPETITION REQUIREMENTS: (Any entries not meeting these requirements will be automatically disqualified).

I. DESIGN AND CONTEST RULES:

1. Banners cannot exceed a maximum of 72 inches wide and 36 inches high.



2. All entries must include the school name and colors, city and state, current year and the word "SECME" must appear on the banner.
3. All schools participating in the SECME Design Competition Finals must be prepared to parade with their banner at the start of the competition.
4. Banners must be hand-made original work for the year it is submitted

II. SCORING:

1. The maximum points for a banner are 100.
2. The banners will be scored in the following categories:
 - Content (25 pts) – Quality and organization of the information of the banner
 - Originality (25 pts) – Innovativeness of the design and how well it presents the ideas on the entry.
 - Creativity (25 pts) – The uniqueness of the information depicted.
 - Appearance (25 pts) – The attractiveness and neatness, scale and balance of the presentation.

The maximum number of points is 100. A suggested banner evaluation sheet is attached

2008 SECME BANNER COMPETITION (Evaluation Sheet)

Please Check: Elementary Middle School/Junior High High School

Design Team Name _____

School Name _____

District _____ City/State _____

Judge's Name _____ Date _____

The banner is disqualified if any of the following requirements are not met:

Requirements Check: 72" wide by 36" high School Name and colors
 City and State Current Year The word "SECME" on the banner

The maximum number of points for a poster is 100.

EVALUATION CATEGORIES

POINTS

I.	CONTENT Measure the quality and organization of the information on the banner (0-25 points)	_____
II.	ORIGINALITY Evaluate the innovativeness of the design, how well it presents the ideas on the entry (0-25 points)	_____
III.	CREATIVITY Judge the uniqueness of the information depicted (0-25 points)	_____
IV.	APPEARANCE Examine the entry for attractiveness and neatness, scale and balance of the presentation (0-25 points)	_____
	TOTAL (Highest possible score is 100)	_____

JUDGES REPORTING FORM FOR 2008 SECME ENGINEERING DESIGN (MOUSETRAP CAR) TEAM COMPETITION

Please Check: _____ Middle School/Junior High _____ High School

LIST EACH TEAM'S NAME, SCORES IN EACH AREA OF DESIGN COMPETITION, AND OVERALL TOTAL; INDICATE 1st, 2nd, & 3rd PLACE TEAMS

DESIGN COMPETITION TEAM NAME	S C O R E S				
	Mousetrap Car Construction & Run	Design Drawing of Mousetrap Car	Technical Report of Mousetrap Car	Team Interview With Judges	OVERALL TOTAL AND RANK : 1 st , 2 nd , 3 rd
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

PREPARED BY: _____

DATE OF COMPETITION: _____

JUDGES REPORTING FORM FOR 2008 SECME STUDENT ESSAY COMPETITION

Please Check: Elementary Middle School/Junior High High School

LIST EACH STUDENT'S NAME, FINAL SCORE AND INDICATE 1st, 2nd, & 3rd PLACE WINNERS

ESSAY COMPETITION STUDENT'S NAME	SCHOOL'S NAME	SCORE	RANK 1st, 2nd, 3rd
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

PREPARED BY: _____

DATE: _____

JUDGES REPORTING FORM FOR 2008 SECME STUDENT POSTER COMPETITION

Please Check: _____ Elementary _____ Middle School/Junior High _____ High School

LIST EACH STUDENT'S NAME, FINAL SCORE AND INDICATE 1st, 2nd, & 3rd PLACE WINNERS

POSTER COMPETITION STUDENT'S NAME	SCHOOL'S NAME	SCORE	RANK 1st, 2nd, 3rd
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

PREPARED BY: _____

DATE: _____

JUDGES REPORTING FORM FOR 2008 SECME BANNER COMPETITION

Please Check: _____ Middle School/Junior High _____ High School

LIST EACH STUDENT'S NAME, FINAL SCORE AND INDICATE 1st, 2nd, & 3rd PLACE WINNERS

BANNER COMPETITION DESIGN TEAM NAME	SCHOOL'S NAME	SCORE	RANK 1st, 2nd, 3rd
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

PREPARED BY: _____

DATE: _____

SECME Student Competition Grievance Request for Review by Judges

1. Competition Site/Date _____

2. School _____

3. Team Name _____

4. Adult Leader/Supervisor _____

5. Address _____

6. Telephone/Fax _____

7. Competition Rule
or Procedure in Question _____

8. Specific Concern
(Use 2nd sheet if needed
to document fully) _____

9. Submitted by _____
Name

Signature

10. Date _____

