

Civil and Environmental Engineering

University of Wisconsin-Platteville

38th Annual Model Bridge Contest April 2, 2009

Objectives

The object of this contest is to design and construct a two dimensional bridge structure capable of spanning 19 inches. The model must be made using the balsa wood in one material kit (supplied upon registration). Any type of glue may be used.

The model will be tested to determine its load-carrying capacity by adding increasing amounts of weight at the testing locations until it breaks (fails). The model demonstrating the highest load-carrying capacity per unit weight will be declared the winning entry.

What's New

The entry form now asks if the students are planning to attend the UWP Engineering Expo to watch the bridges tested. Please check the box and indicate a desired time during the day to watch the students' bridges being tested.

Entry Rules

1. All contestants must use the official material kits available from the College of Engineering, Mathematics and Science, UW-Platteville. The cost of the kits includes the entrance fee for the contest. To order material kits, send \$6.00 (checks payable to Model Bridge Contest) for each kit to:

*Model Bridge Contest
College of Engineering, Mathematics and Science
Attn: Matthew Roberts
1 University Plaza
Platteville, WI 53818*

2. Any type of structural model is acceptable that conforms to a 19 inch span. Several possible configurations would be: Box beam, arch, and various types of trusses (see examples).
3. Not more than one kit may be used to construct each model. Only those materials in the kit may be used (glue is not supplied in material kit). Students may choose any type of glue to assemble the structure, however only glue joints are allowed. No additional materials are permitted.
4. The model must be completely assembled when submitted for testing.
5. An individual may enter as many models as desired. Only one prize will be awarded to an individual. The highest placement from multiple entries will determine the prize awarded.
6. Although any structural model is acceptable, it must be constructed so that it is one continuous unit.
7. The testing will be carried out on a first come first serve basis. A maximum of 10 entries

- per school will be tested consecutively.
8. The final decision on all questions will be left to the judges—faculty members of the College of Engineering, Mathematics and Science.
 9. An entry number has been assigned to each kit. This entry number **MUST BE WRITTEN ON THE MODEL BRIDGE SPAN BEFORE IT IS SUBMITTED FOR TESTING.**
 10. An entry form is sent with each kit (group of kits). It is very important to complete and return this form so that it is legible and that all names of ALL the persons participating in the construction be included. Certificates for the contest will be typed using these names. If it is a class project, just use the name of the class; i.e., “Physics Class”. Please complete the data sheet and return it by March 23, 2009. Entries for which the sheets are not returned by March 23, 2009 will be tested at a time convenient to the College of Engineering, Mathematics and Science.
 11. There must be at least 10 individual entries from a high school to be eligible for the group entry division.
 12. Mail entries to the College of Engineering, Mathematics and Science -- address above. All entries delivered personally shall be brought to the Engineering Materials Lab, Room 49 Ottensman Hall, before 2:00 PM Thursday, April 2, 2009. Mailed entries must be received on or before Wednesday, April 1, 2009. It is the responsibility of the entrant to pack the bridge for safe mailing. Entries received in a broken condition will not be repaired by the College of Engineering, Mathematics and Science.

Divisions

Senior High Division

Individual Entry - Single entries may be submitted in this division by an individual high school student or a group of students. Only students in grades 9 thru 12 may enter in this division.

Group Entry - A combined entry may be submitted from any high school and must be composed of 10 or more single entries. (Any number of students may work on a single entry). Prizes will be awarded to the three high schools having the highest average load - to - weight ratio for their top ten entries. Any student participating in the group entry division is automatically entered in the individual competition and is eligible for individual prizes. Only one group entry is allowed per high school.

Junior High Division

Individual Entry - Single entries may be submitted in this division by an individual 7th or 8th grade student or group of students.

NOTE: There is no group entry competition for the junior high division.

Prize List

Senior High Division

| PLACE | NO. OF AWARDS | AWARD |
|-----------------|------------------------|----------------------|
| 1 st | 1 | Calculator + T-Shirt |
| 2 nd | 1 | Calculator + T-Shirt |
| 3 rd | 2 | Calculator + T-Shirt |
| 4 th | 3 | Calculator + T-Shirt |
| 5 th | 4 | Calculator + T-Shirt |
| 6 th | approx. 10% of entries | T-Shirts |

1. Calculators and/or Engineering and Science Expo T-shirts will be awarded to the winning entrants. If more than one person works on a winning entry, the prize will be divided in an appropriate manner.
2. A maximum of two T-shirts will be awarded per entry.
3. An "Engineering and Science Expo 2009" T-Shirt will be awarded to the highest finisher in each group entry, if they have not received an award in the individual competition.
4. Each entrant will be awarded a Certificate of Merit.

Junior High Division

| PLACE | NO. OF AWARDS | AWARD |
|-----------------|---------------|----------------------|
| 1 st | 1 | Calculator + T-Shirt |
| 2 nd | 1 | Calculator + T-Shirt |
| 3 rd | 2 | Calculator + T-Shirt |
| 4 th | 3 | T-Shirt |

1. Calculators and/or Engineering and Science Expo T-shirts will be awarded to the winning entrants. If more than one person works on a winning entry, the prize will be divided in an appropriate manner.
2. A maximum of two T-shirts will be awarded per entry.
3. Each entrant will be awarded a Certificate of Merit.

Group Division

Plaques will be given to the highest three schools.