

**13th Annual
MCC High School Engineering Competition
Monroe Community College
Thursday, April 29th, 2010**

Event: **Wooden Bridge**

Objective: To design and build a wooden bridge with a mass less than 22 grams that will support the maximum load at mid-span.

Bridge Specifications:

Materials Allowed: Wood and Glue

Span: 60 cm open span (be sure to make your bridge longer)

Testing Surface:

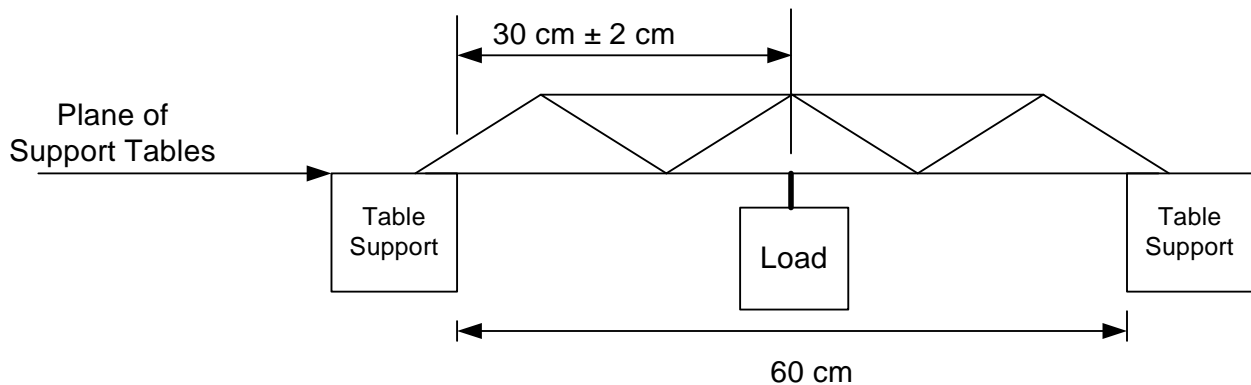
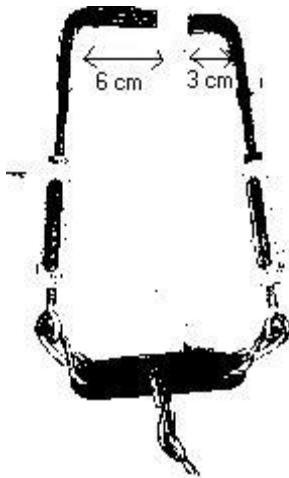


Diagram of the harness used to attach the load to the bridges:

The curved hooks have a diameter of approximately 1 cm.



Rules:

1. Each school may enter a maximum of four bridges in this event. The teacher must either call or email Sue O'Brien at 292-2001 or sobrien@monroecc.edu by **Tuesday, April 13, 2010** to tell her how many Wooden Bridges will be entered. The teacher must then bring a completed registration form to the competition for each bridge entered.
2. No part of the bridge may extend below the plane of the support tables when the bridge is first placed on the testing table. It will be allowable for parts of the bridge to deflect as much as 3cm below the plane of the tables due to the applied load
3. MCC judges will load the bridges by adding sand to a bucket suspended from the harness. Additional sand will be added until the bridge breaks or deflects more than 3cm. The mass of the sand, bucket, and harness will then be recorded.
4. Students must use a pen or marker to label the point where they would like the judge to hang the harness hooks. These points must be on the lowest chord and within 2 cm of the middle of the bridge.
5. The winner will be the bridge supporting the largest load with a deflection not more than 3cm.
6. Each entry from a given school must represent a distinctly different design. Cosmetic differences do not constitute different designs. If a school has multiple entries without distinct differences, only the best finisher with a given design will be counted in the final results.
7. Entries from previous years are strictly prohibited.
8. These rules are available at www.monroecc.edu/depts/eng&phy/highschl.htm .

For questions contact John Wadach at 292-2488 or jwadach@monroecc.edu .