



FunFest 2026

The Kim & Jim Morris Toothpick Bridge Competition Rules Middle School



Objective:

Entries and Judging

Participants: MCS may enter a total of 75 bridges (balsa wood & toothpick), with 15 bridges being scheduled every 30 minutes starting at 9:30 am and ending with the 11:30 am testing cycle. Participants may include individuals or teams of 2 or more students.

Submission: All submissions must be delivered to Sandhills Community College (by school personnel) on **Wednesday, April 1, 2026, to Little Hall, Room 153**. Each bridge must have an identification tag that correlates to a Moore County Schools spreadsheet.

SCC Judge(s): Michael Sassano, Coordinator, Building Construction Technology and Construction Management Technology

Judging Location: Sandhills Community College campus at the Outdoor Picnic Shelter

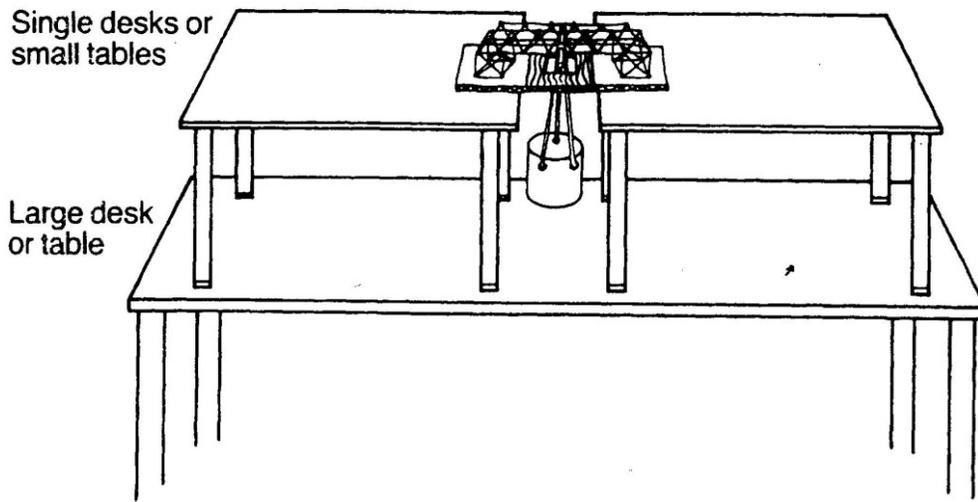
Notes: SCC provides the testing apparatus. SCC judges will find the Mass of each bridge and will supervise MCS student testing until failure.

Determining the winner:

Competition Rules

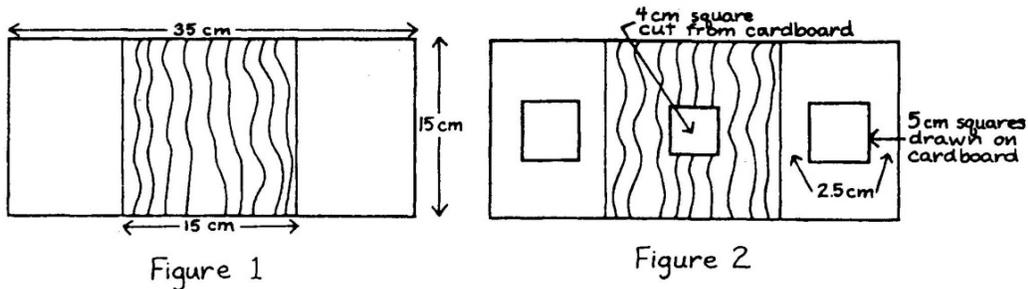
1. Glue must be wood glue (either white or colored glue is fine).
2. Bridges will consist of no more than 125 toothpicks.
3. The bridge must be built according to the bridge building code, using only materials supplied by the I. Saw Lumber Company.
4. The bridge will be judged by the quality of the building plans and the strength of the bridge.
 - a) Judging the building plans will consider neatness of the finished bridge, cost of the bridge, and how well the finished bridge matches its plans.
 - b) The bridge will be tested for strength by placing a bar transverse to the span (i.e. perpendicular to the roadway) as close as possible to the middle of the bridge span, and hanging weights from the bar.
5. The teacher will suspend weights from the bridge according to the project director's wishes.

- The last weight that the bridge holds for 30 Seconds without touching the cardboard in any spot (except at the bridge foundation) is the weight recorded for the strength of the bridge.



Bridge Building Code

- Build the bridge on a piece of cardboard 15 cm by 35 cm (figure 1).
- Draw a river, 15 cm wide, in the middle of the cardboard (figure1).
- Draw one 5-cm square at each end of the cardboard, 2.5 cm from the river and 2.5 cm from the edge (figure 2).
- Draw and cut a 4-cm square exactly in the center of the cardboard, in the river (figure 2).



- If you choose, plans can be drawn of the bridge to show four views: the view from one end, the side view, the road bed, and the top view. The plans must be readable, clear, and may not be changed once construction has begun. **THESE PLANS WILL NOT BE JUDGED.**
- When building the bridge, only apply glue sparingly to join the toothpicks.

7. The bridge must at all times touch only the cardboard inside the drawn squares. Toothpicks may be glued into holes punched inside in the cardboard squares.
8. The bridge must be more than 5cm high. This distance is measured from the cardboard to where the deck of the bridge would be. The tag board boat, 5 cm tall, must be able to travel the length of the river. The 5cm clearance must be maintained from riverbank to riverbank.
9. The bridge must be at least 4cm wide. The tagboard truck, 3.5cm wide, must be able to travel the length of the road, if the bridge had a deck.
10. Bridges can be constructed with a superstructure, substructure, flat roadbed, or combination thereof. Gussets are not allowed.