**Objective:** The objective is to design and build a bridge to span a given distance and carry the maximum amount of load with the minimum mass of material given material the following design constraints.

## Entries and Judging

**Participants:** MCS may enter a total of 75 bridges, 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 Thursday, March 27th in Little Hall, Room 153. Each bridge must have an identification tag that correlates to a Moore County Schools spreadsheet.

**SCC Judges: Michael Sassano**, Coordinator, Building Construction Technology and Instructor/Tutoring Coordinator, Engineering and Construction

**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:** The bridges will be tested to determine the maximum load at failure using the sand and bucket method. The bridge with the largest load carrying capacity is the winning bridge. ***Bridge Efficiency will be utilized to determine the FunFest winner.***

**Bridge Efficiency = Load Carried @ Failure / Mass of Bridge**

**Testing Requirements**

x   The bridge must allow a 3"×3" cube to be passed beneath it at mid-span, measured while the end supports are resting on a flat surface.

x   There must be a 1/2" hole at mid-span in the bridge deck to allow for testing. There must be no obstructions below the hole that would prevent the passage of the testing rod.

x