

# The Scholar Bridge: Bridge Dynamics

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Students will design a Styrofoam bridge to participate in the KEEN Bridge Design Contest. Following the given rules and instructions:

- Design optimal geometry
- Optimize material utilization
- Propose 2 or 3 models for testing
- Construct and test the final version of the bridge



**KEEN** BRIDGE DESIGN CONTEST

**2025**  
Virtual Competition  
January 21<sup>st</sup>, 2026  
6:00 PM (EST)



Currently Searching for a Sponsor for 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Place Prizes

**RULES:**

1. One bridge may be entered into the competition per University / Institution. To enter, send the name and contact information for your team members and advisor to Matt Lovell, [lovellmd@rose-hulman.edu](mailto:lovellmd@rose-hulman.edu).
2. Each team shall build a bridge using only cardstock (80-110 lb cover) and standard staples (1/4" leg). No other materials may be included in the bridge.
3. The bridge shall be limited to a maximum weight of 200 grams (equivalent to approximately 10 sheets of 8.5"x11" card stock and 500 staples).
4. The bridge shall span between two equal height tables set 36" apart.
5. The surface of the tables must be smooth. The bridge must rest on the horizontal surface of the table, and it may not contact the vertical sides of the table.
6. Before loading begins, no part of the bridge may be below the surface of the supporting tables.
7. The bridge may not be affixed to the table (clamps, blocks, etc.).
8. The bridge will be loaded by suspending weights at midspan via a hook, strap, bucket or other mechanism.
9. The loading strap may not be used for any other purpose other than supporting the applied loads.
10. Load increments may be decided by each University / Institution. For a load increment to count, it must be supported for 10 seconds without interference.
11. Loading will occur in the presence of an advisor during the Virtual Competition Meeting (Zoom) on the date indicated above. Prizes will be awarded to the teams that constructed the bridges with the greatest structural efficiency (Peak Load / Bridge Weight).
12. Competition judges will host a virtual Q/A session on Nov. 20<sup>th</sup> at 4:00pm EST. to clarify rules and loading procedures.

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