

Wednesday Challenge Form

Group Members: Andrew H., Hunter L., Justin M., and Shaunt Y.

Problem Statement: Design a bridge made of spaghetti and wood glue. Goal is to make the highest efficiency bridge. Efficiency is defined as the ratio of the supported bridge weight to the mass of the bridge. The supported weight will be provided by water. The span distance will 24". Each group will be provided 100 pieces of spaghetti, however only 20 can be used in the final design. In addition, the bridge must accommodate the weight attachment hardware provided by me. Refer to the JPL Invention Challenge Bridge Challenge for reference. Duration was 2.5 weeks.

Approach: My group and I decided that it would be best for us to build a bridge that was shaped as a triangular prism with multiple triangles made of glued spaghetti going down the long rectangular piece. This would make our bridge very strong because triangles would distribute the weight evenly and therefore allow the bridge to carry a good amount of weight.

Solution: Our team got one of the highest scores in the class (3rd place). Our score was 11.36. The first place winner was Conner's team, who got 13.

Lessons Learned: I learned that our bridge might have been stronger if our pieces were glued in a neater/more organized way.