

## Spaghetti Bridge Project

**Your Challenge** is to construct a bridge to certain specifications. The goal is to design and create the most efficient and aesthetic bridge possible using **only spaghetti noodles and school glue**.

### The Criteria:

**Weight Held** – You want your bridge to hold more weight than your classmates' bridges.

**Structural Effectiveness** is equal to the weight supported divided by the weight of the bridge.

**Aesthetics** Subject to Ms. Keith's opinion and will be determined through visual appeal, uniqueness, symmetry, & neatness.

Data calculations must be accurate.

### The Specifics:

**Span:** The bridge must be a **minimum** of 12 inches in length. *Note:* the gap that you will bridge is 10in, if your bridge is short, you will lose credit, or possibly be disqualified. There is **no** maximum length.

**Deck:** Must be at least 1.5 inches wide. This will be measured using a block of wood that should be able to travel the whole length of the bridge. The width cannot exceed 2.5 inches.

**Bridge Height:** The height of the tallest point of the bridge can be no more than 7inches above the level of the higher table.

**Load Connection:** The bridge must be able to accommodate my loading block at the midpoint of the deck. The loading block is 2in long, by 1.5in wide, by .75in tall. A hole in the center of the bridge must accommodate a  $\frac{1}{8}$ in rod that must pass through the vehicle deck.

**Pedestal:** One table is exactly 3.5cm lower than the other. Your bridge should have a pedestal on one end to account for this issue. The pedestal is part of the bridge; must be constructed from spaghetti & glue and must be attached.

### Material Specifications:

Spaghetti Noodles: Kroger Psst. Brand Spaghetti available in 16oz packages is about the cheapest it gets.

*Any other type/style noodles (besides spaghetti) will result in deduction, possible disqualification.*

*Elmer's (or similar) school glue. Epoxy, wood glues, hot glue, and super glues will result in deduction, possible disqualification.*

Do not coat bridge with any material (paint, stain, or glue)

Total Weight of bridge cannot exceed 10 ounces.

**Bridges not meeting these specifics will be penalized and possibly disqualified**