

# The Craft Stick Bridge Project



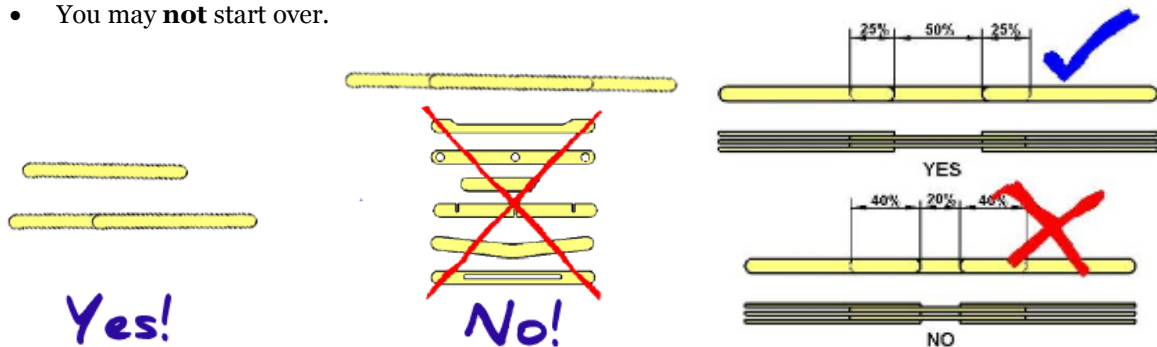
## Objectives:

The first objective of this project is to build a bridge from wooden craft sticks that will support the largest applied force before failure. The second objective is to create and present a Power Point that summarizes your bridge building experience.

## Construction Guidelines

**You must research, design and construct a truss bridge.** It must be constructed from typical wooden craft sticks and white glue only. The bridge must have  $610. \pm 1$  mm span and not exceed a height (depth) of  $127 \text{ mm} \pm 1$ , but must weigh no more than 400.0 grams or less. The bridge's roadway must be continuous, level, free of obstructions and at least  **$102 \pm 1$  mm but not more than  $138 \pm 1$  mm wide.**

- You will work as a team.
- You must keep a journal of your research and your construction.
- You must show Mr. Causey your design and plan before you build your bridge.
- You must determine the number of craft sticks you will use and submit your bid to Mr. Causey.
- The actual construction **must be done in class.**
- The sticks **may not** be altered other than mild sanding.
- The sticks may not be coated or treated with anything.
- The roadway planks may be cut to fit only.
- No more than 50% of a plane side of a stick may be glued to other sticks. (no complete overlapping)
- All construction must be completed before the competition.
- No modifications shall be done during the competition.
- You may **not** start over.



## The following materials may be used for construction:

- Standard craft sticks (11.30 cm x 1.00 cm x .20 cm)
- Elmer's white glue
- Binder Clips (as a vise only)
- Utility knife
- Sand paper

# Craft Stick Bridge Point Distribution



## The Bridge is worth 100 points

A completed bridge designed and constructed according to specifications and finished on time will earn 70 points. A neat and accurate journal will earn another 10 points.

If, for any reason, the bridge is non-compliant with any of the specifications or the delivery date, the device may not be tested and the point deductions will be as follows:

<b>Non-compliance with specifications:</b>	five (5) points deducted
<b>Late delivery penalty:</b>	five (5) points deducted

- The bridge that holds the greatest payload prior to breaking will receive (15 points)
- Second place will receive (10 points)
- Third place will receive (5 points)
- All other places receive (0 points)

## PowerPoint is worth 100 points

The power point should discuss bridge basics and chronicle your experience. It will be graded on content, color scheme, fonts, pictures and your presentation. (see rubric)

### The following questions should be addressed during your presentation:

- How was the design of the bridge chosen?
- What construction sequence was used?
- What was the most difficult part of building the bridge and how was it resolved?
- What is the expected behavior of your bridge during the load tests?

**Due Date:** \_\_\_\_\_



***"Great things are not accomplished by those who yield to trends and fads and popular opinion."***

***- Jack Kerouac***