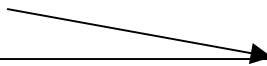


# Bridge Design Sheet

**Don't Forget!!!!** You need to have the following completed and handed in when you turn in your bridge:

- A fully constructed Bridge (no kidding!!!).
- Your full size drawing.
- The structural stability results of your bridge. (You can use this page if you like.)

Draw your final bridge design in here.



Structural Stability Results from your bridge design:  $K=2J-R$

$$K = 2( ) - \underline{\hspace{2cm}}$$

$$K = \underline{\hspace{2cm}} - \underline{\hspace{2cm}}$$

$$K = \underline{\hspace{2cm}}$$

$$M \underline{\hspace{2cm}} K \underline{\hspace{2cm}}$$

# Bridge Design Sheet

## Steps in the Bridge Project

- Form yourself into groups you can together well in. (Subject to change.)
- Brainstorm ideas for a truss style bridge design, look at all options.
- Apply to the Structural Stability Formula, find a design that works and is agreed upon.
- Assign measurements to each piece in your design for an *initial wood estimate*.
- Show to Mr. Sadowski, get drawing materials to create a full size drawing.
- Measure and add up all pieces on the full size drawing for a **Final Wood Estimate**.
- Get approval from Mr. Sadowski and receive materials to build your 1<sup>st</sup> side.
- Cut, file, and glue together 1<sup>st</sup> side.
- Bring drawing back to Mr. S to get remaining materials for Bridge.
- Cut, file, and glue together second side.
- Make connecting members and attach sides to each other.
- Let dry.....Test!

## Guidelines

- Bridge must successfully span opening of 2 feet
- Bridge must hold a minimum of 20 lbs.
- Each group receives 216" of material



## **Scoring Rubric**

Description	Points Possible	Points Earned
1. Bridge Achieved 2' span	10	_____
2. Design was drawn correctly & followed	20	_____
3. Design was applied to structural stability formula	10	_____
4. Construction was sound & neat (no dried excess glue)	20	_____
5. Bridge Held at least minimum weight	20	_____
6. Group used class time efficiently	20	_____
<b>Total</b>	<b>100</b>	<b>_____ /100</b>

Weight Held: \_\_\_\_\_ lbs.

## Group Members

_____	_____
_____	_____