

Names of bridge designer(s): \_\_\_\_\_

## Mini-Bridge Competition

This week, we're going to build mini-bridges and test them. Your mini bridge must be completed by Friday so that it may be tested in class using the modified bridge tester.

### Rules:

- Students are to make bridges in the groups that they will use for their full-size bridge. Groups of two are acceptable. Under special circumstances a group of three may be allowed.
- Bridge must be 16 centimeters long and 4-6 centimeters wide
- Bridges must utilize either a trapezoidal or triangular truss
- No sandwich joints are allowed
- Gussets are a required element of a well-designed bridge.
- A minimum of 2 and maximum of 4 vertical supports will be used per truss
- Bridges trusses may be connected together using any mechanism the student group deems appropriate.

### Grading:

- $\frac{1}{2}$  (50 percent) of the grade on this bridge will be awarded based on meeting the requirements of the project (as dictated above) and completing the bridge by the assigned date.
- $\frac{1}{4}$  (25 percent) of the grade on this bridge will be awarded based on the quality of the bridge workmanship.
- 15 percent of the grade on this bridge will be awarded based on teamwork and adherence to the blueprint created on this sheet
- 10 percent of the grade on this bridge will be awarded based on the amount of weight this bridge is able to hold and the ratio of the weight held to the mass of the bridge on testing day.

### Materials:

- Balsa Wood
- Superglue

### Results:

How much does your bridge weight (prior to destruction) in grams:

How much weight did your bridge hold (pounds):

What is the ratio of the weight your bridge held to the weight of the bridge (pounds held/grams):