

# Bridge Project

Name: \_\_\_\_\_

## Project parameters:

You will be supplied with 20ft of 1/8 steel wire (pencil rod)  
No other materials are to be used

## Challenge:

Your bridge will have to cross a 16 inch gap and withstand down forces and weight

The weight mechanism must be able to attach to your bridge in the middle  
We will add more weight up to a specific number to be announced later until the bridge is close to failing

Your bridge is to be a maximum of 18 inches long, which allows for 1 inch overhang on each side of the gap

You may build any style bridge but must only use the supplied materials

Bridges may be mig welded, spot welded, or oxyacetylene welded  
Welds are only to be used on joints and not to "thicken" up the wire to add weight or strength. Failure to comply with this rule will result in disqualification

## Groups:

Teams are to be no more than 4 people

## Planning:

The design phase is a very important process with this project as there will be no extra materials given. Detailed plans of your bridge including different angles of view and measurements must be included with your final project team booklet. We will go over in class what a proper scale drawing looks like. The planning booklet makes up 40% of your grade. The planning booklet should be handed in a duo tang or other 'nice' organized file folder

## Grading:

Planning booklet: 40%

Design and build quality: 30%

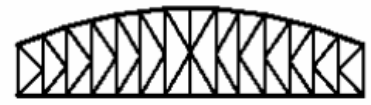
Competition force withstanding: 30%



Pratt



Parker



K-Truss



Howe



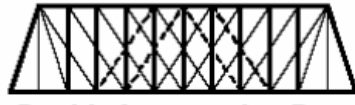
Camelback



Warren



Fink



Double Intersection Pratt



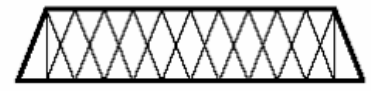
Warren (with Verticals)



Bowstring



Baltimore



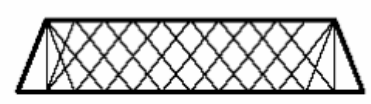
Double Intersection Warren



Waddell "A" Truss



Pennsylvania



Lattice

