

## SRT II - Tower Project

### Objective:

Design and engineer a tower using 1/8 inch x 1/8 inch balsa wood to hold as much mass as possible for the mass of the tower.

### Design:

- You will draw the design of your tower on a piece of graph paper or using a computer.
- Each square on the graph paper grid represents 1 cm in the actual tower.
- You must draw a side profile and a drawing from the top of the tower.

### Construction:

- The overall width of the tower may not exceed 9.5 cm.
- The overall height of the tower must be 26 cm.
- The tower shall be open in the center to allow a 2.5 cm rod through the center.
- The bridge shall be constructed entirely of the 10 1/8-inch x 1/8-inch x 24 inch balsa wood strips provided to you.
- You will be provided a small bottle of either the white or green glue.
- Wood joints may be notched if desired.

### Testing:

- Mr. Evans' will test your towers in a consistent manner to determine which tower holds the most for its mass.  $\frac{mass_{held}}{mass_{tower}}$
- The mass will be placed at the center.

### Resources:

- Use the web for research on tower designs.
- Observe towers around the area and consider how they are being used.

### Grading:

- Design (20 points)
  - Neatness
  - Following directions
  - Design must match the tower that is brought to class on March 22.
  - Due: March 16, 2007
- Bridge (60 points)
  - Following directions
  - Neatness
  - Reasonable design
  - $\frac{mass_{held}}{mass_{tower}}$
  - Due: March 22, 2007