Cantilevered Beam Construction Activity

Intro to Technology
Pulaski High School
Tech. Ed. Dept.
Mr. Hassman

Given two 8.5"x 11" sheets of card stock, design and construct the longest possible cantilevered beam that will support an unopened 12 fluid ounce aluminum soda can. The beam must be attached to a rectangular piece of wood stock, which will be provided for you. The wood stock will be supported in a bench vise during the test of the beam.

Elmer's wood glue is the only fastening adhesive permitted for construction of the beam. Mechanical fasteners and/or other adhesives are not allowed. However, the beam may be attached to the wooden stock using no more than 6 identical mechanical fasteners and Elmer's wood glue. These fasteners are not to provide additional strength or support to the beam; they are only to be utilized as fastener.

Other rules:

- The card stock may not be impregnated.
- Decorations and/or color may be added to the beam, but only through the use of pencil or marker (i.e. no paint).
- Excessive glue is not permitted.
- The student will place the soda can on the beam after the structure has been secured in the vise.
- The length of the beam will be measured horizontally from the nearest constraint to the furthest point on the can.
- The beam must support the can for a minimum of 30 seconds.

Evaluation:

The longest, successful beam of the class	30 pts
The 2nd longest, successful beam of the class	29 pts
The 3rd longest, successful beam of the class	28 pts
The 4th longest, successful beam of the class	27 pts
The 5th longest, successful beam of the class	26 pts
All other successful beams	25 pts
Unsuccessful beams	22 pts
Disqualified beams	0 pts