

## **EVENT 2: The Cantilever**

*(Revised 12/2/09)*

**OBJECTIVE:** Design and build the longest cantilever segment using only straws and masking tape.

### **RULES:**

- a. The team will design a cantilever segment and bring their cantilever segment built or partially built to the competition.
- b. The Cantilever is to be constructed from not more than 50 standard size drinking straws 0.70 cm or less in diameter and 20.0 cm or less in length and 25 feet of two inches or less width masking tape.
- c. The cantilever must be free standing (i.e., no part of the cantilever may be attached to the testing surface).

### **COMPETITION AND SCORING:**

- a. The team will have 10 minutes to assemble their cantilever.
- b. Once assembled, the team will notify the judge(s) that their entry is ready to be measured.
- c. The Cantilever will be measured on a tile (or similar surface) floor.
- d. The cantilever must stand free for 15 seconds to qualify.
- e. After 15 seconds, the judges(s) will measure the horizontal component of the cantilever segment from the end of the free end to that part of the cantilever that extends past the base (i.e., any part of the cantilever segment directly above any part of the base will not be included in the measurement).
- f. The counter balance segment will not be considered part of the cantilever segment.
- g. The longest cantilever wins.
- h. In the event of a tie, the cantilever with the smallest mass and longest length will win.

$$\text{SCORE} = \frac{(\text{Your Teams Cantilever length})}{(\text{Winning Cantilever length})} \times 100$$

Updates to the rules will be posted on the NJAAPT web site at [www.njaapt.org](http://www.njaapt.org). Additionally, frequently asked questions with answer will be available by e-mailing [John\\_Valente@mast.mcvsd.org](mailto:John_Valente@mast.mcvsd.org). It is your team's responsibility to keep the team updated about changes and clarifications to the rules.