

Cowley College Math and Science Day
February 10, 2010
Eiffel Tower Competition

A registration entry form must be completed by each competing school and returned to the Cowley College Natural Science Office by January 29, 2010.

Design Statement

Using plastic drinking straws, build a tower that will support the weight of a wooden meter stick in a 5 minute timeframe. The three tallest towers still standing after the judges confirm the height of the towers will be declared the winners.

Materials

All materials must be supplied by the students.

1. An unlimited number of plastic drinking draws that adhere to the following guidelines:
 - Firm or flexible drinking straws
 - ¼ inch maximum interior diameter
 - 10 inch maximum length
 - .01 inch maximum wall thickness
2. Bread wrapper or garbage wire ties not to exceed 4 inches
3. One wooden meter stick

Rules and Remarks

1. The base of the tower must be confined to a 3 foot square that will be marked on the competition floor. Sections of the base not touching the floor may extend beyond the base area. All parts of the tower must be connected by straws- 2 or more free standing structures are not allowed. However, multiple bases are allowed as long as the bases are connected.
2. Two student teams will assemble the tower after time has been signaled. The straws may be assembled using the approved wire ties or inserted into each other without the ties. No preassembly is permitted. The meter stick must be placed on the tower before the end of the 5 minute period; height of the tower will be measured from the lowest part of the meter stick to the floor.
3. Any number of straws may be assembled end to end however; no more than 6 straws may be bundled together or stacked inside one another. You may have bundles of 6 stacked end to end but if assembled laterally to each other there must be at least 2 straw widths between the bundles.
4. Each team will be limited to constructing their tower in a 10 ft by 10 ft work area. Towers that collapse during the 5 minute building period may be rebuilt. Towers that collapse after the 5 minute construction period but before judging will be disqualified. Towers that collapse outside the 10 ft by 10 ft construction area will also be disqualified.
5. Teams may bring boxes of whole or precut straws to the construction area. Ladders, scissors, tape, cutting instruments will not be permitted on the area. Preassembled materials are not permitted.
6. Following judging, all materials must be removed by the team and disposed of in the appropriate receptacles. Failure to remove all materials will result in disqualification.

Judging and Scoring

1. Prior to the competition the diameter of the straws will be checked with a standard ¼ inch steel dowel pin. If the dowel falls through any of the straws the team will be disqualified.

2. The teams will be given a 1 minute organizing time prior to the construction. Several teams will compete at the same time in their own designated work area. When judges signal the start of the construction period the students will have exactly 5 minutes to build the towers and place the meter stick. Judges will measure the height from the floor to the lowest part of the meter stick to obtain the total height.
3. The decisions of the judges are final in all phases of the competition.

Any specific questions concerning this competition can be directed to Scott Layton:
laytons@cowley.edu or 620-441-5331