



BRIDGE DESIGNING COMPETITION GUIDELINES

PROBLEM STATEMENT

Design a truss bridge using Popsicle sticks (ice cream sticks) satisfying the stated Constraints.

Event Structure

- Round 1: Teams should construct the model during the event in the stated time period. The participants can test their structure to check for the strength of the model.

Materials

- Use only the popsicle sticks provided by the club.
- Sticks can be altered physically by cutting or notching at any angle.
- Only Fevicol can be used as adhesive, use of other adhesives may lead to disqualifications.
- Use of threads is not allowed.

Bridge Dimensions

- Length = 56-60 cm
- Minimum length of loading platform = 30 cm
- Width = As per design of the team
- Height = As per the design of team.

Configuration of Models

- Clear distance: An 8cm high by 4cm wide clearance must be provided along the entire length of the bridge.

Testing the bridge

- The load will be applied through a hook at the different positions of the bridge.
- The bridge model will be loaded till failure. The maximum deflection at the point of yielding and the load at that moment will be used to evaluate the Structure.
- A deflection test will also be performed to properly distinguish the winner.



Team Size:

- 3 – 5 students per team.
- Any number of teams can participate in the event from different Pools.

Construction

- Sticks can be stacked together lengthwise to form stronger structural elements or to make long span elements.
- The overlapping between two sticks should be more than 40%.
- Maximum number of sticks that can stack together is three.

Judging and Scoring

- First the structure will be reviewed to check if it violates any rules mentioned above.
- The scoring of the structure will be based on performance as well as aesthetics.
- The bridge will be scored on how well the material has been used to support the load.
- The efficiency will be calculated as the ratio of ultimate load capacity and the bridge weight.
- The bridge will also be scored on aesthetics. The judges will judge the bridge based on the detail to connections and members, the uniqueness of the design and its overall look.
- The deflection of the bridge at yielding will be noted. If the deflection increases more than 10 mm, then the load at that deflection will be taken as the ultimate load.

Penalties

Violating any of the conditions mentioned underneath, penalty will be imposed according to the judges and may lead to disqualification:

- Dimensional specifications are not met (Penalty of 10% of the total score)
- Use of material, except the ones stated in rules (Penalty of 20% of the total score or can lead to disqualification as decided by the judges)
- In case of any discrepancies, the decision taken by the judges and the council will be the final verdict.

AN IMPORTANT NOTE:

- The organizers reserve the right to modify the rules or guidelines at any time. Any such changes will be communicated to the participants promptly.



- Decisions made by the judging panel will be final and binding on all teams. No appeals or queries regarding the judgment will be entertained.
 - Prize pool is subjected to the number of participants and on the discretion of the organising committee.
 - Teams are responsible for ensuring their submission complies with the guidelines.
 - **Cliffesto'25** reserves the right to disqualify any team at any stage for non-compliance with the rules or misconduct.
 - For any queries or clarifications, participants are encouraged to contact the **Cliffesto'25** organizing team.
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