

BRIDGE THE GAP

OVERVIEW:

All participating teams have to build their bridges and bring them to the competition.

- Teams can come in 2-3 hours prior to the competition, in the case any assembling or finishing is required.
- Once, the competition begins, the teams will not be allowed to make any changes to their structure.

RULES:

Team Specification:

A team can consist of a maximum of 4 members. Students from different educational institutes can form a team and participate.

- All participating members must carry a valid identity card of their respective educational institutes at the time of the event.

Material Specifications:

The bridge must be constructed only from Popsicle sticks (120mm x 12mm x 2mm) and adhesives (Synthetic white adhesive or single component cyanoacrylate adhesive). Use of any other material will lead to disqualification.

- Painting and coating the bridge with any foreign substance is strictly prohibited.
- The Popsicle sticks can be cut or trimmed to any shape or size.
- The adhesive should only be used to join popsicle sticks; However, it can be applied on free members to increase strength of the bridge.

Bridge Specifications:

- Each team has to prepare a deck arch bridge(This type of bridge comprises an arch where the deck is completely above the arch) or Through Arc Bridge(This type of bridge has an arch whose base is at or below the deck, but whose top rises above it, so the deck passes through the arch) of 1000mm (± 50 mm).

- The bridge must be supported only by the 2 footings. No additional support (like support cable, etc) should be provided.
- The bridge should have a maximum width of 150 mm and minimum width 100mm. The height of the bridge at all points from the footings should not exceed 300mm.
- The deck should be purely hanging between the footings resting on 2 tables.
- Any deviation from the Specifications will result in disqualification.

Loading Criteria:

- Loading will be done using a hook at the centre of the bridge.
- Loading will be done in an iron container placed on the hook.
- Every team should have a 10mm hole made in the deck at the centre of the bridge.
- Checking for correctness of material and design will be done prior to loading.
- The bridge will be tested for a deflection of 15 mm at the centre.
- Weight W supported by the bridge until failure or until a deflection of 15 mm is caused will be considered for judgement.
- Team with the highest Loading weight W wins.

JUDGING CRITERIA :

The constructed bridge will be judge on the following criteria:

Maximum load at which the bridge fails.

In case of a tie, following parameters will be considered:

- i) Aesthetics of the structure.
- ii) Maximum Load bridge can carry.
- iii) Number of Popsicle used.

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