

TRUSS ARCH

Event Description:

Truss Bridge is a construction event where participants showcase their engineering skills by designing and building a bridge using trusses. Truss bridges are characterized by their load-bearing structures composed of wooden or metal triangles, known as trusses. These bridges are efficient because they require relatively little material to support substantial loads, making them popular for various applications, including covered bridges, railroad bridges, and military bridges. This event offers a miniature construction experience, challenging participants to design a truss bridge using popsicle sticks and syringes to lift weight using hydraulic power.

Team Specification:

- Each team must have a minimum of 2 members and a maximum of 4 members.

Event Structure:

Participants are tasked with designing a truss bridge using popsicle sticks and syringes, adhering to specific constraints, and demonstrating the ability to lift weight hydraulically.

Round 1:

This round consists of two stages:

Stage 1:

- Teams must present their truss bridge design.
- The bridge will be evaluated according to the dimensions specified in the rulebook.

Stage 2:

- The constructed bridge will be tested to failure.

Testing Criteria:

The bridge model will be loaded until it fails. The evaluation will be based on the maximum deflection at the point of yielding and the load at that moment.

Evaluation Factors:

Stage 1:

- Explanation: 20% of the score
- Aesthetics of the bridge: 20% of the score

Stage 2:

- Efficiency of the bridge: 50% of the score
- Hydraulic functionality: 10% of the score
- Failure to meet dimension specifications: Minimum 10% penalty per specification (of total score) based on rule violations

Rules and Guidelines:

- Participants must register by filling out the Google form for the event.
- The maximum allowable length for the bridge is 45 cm.
- The minimum height of the closed bridge should be 15 cm.
- The minimum gap between the base of the bridge should be 10 cm.
- Overlapping of one stick over another should not exceed 20% (DOUBLING OF STICKS IS NOT PERMITTED).
- The bridge must weigh 300 grams or less.
- Superglues are prohibited.
- Decisions made by judges and event coordinators are final and binding.
- Use of any materials other than those specified (such as thread) will result in disqualification.
- Participants must report 15 minutes before their allotted slot at the reporting desk; late arrivals may be disqualified.
- All team members must present a valid college ID card to participate.
- Any misbehaviour during the event may lead to disqualification.
- NEXUS is not responsible for late, lost, or misdirected entries.
- The organizing committee reserves the right to modify the rules at any time. Registered participants will be informed of any changes via email, message, or WhatsApp groups.
- The jury's decision will be final and binding.

Contact Details :

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