STICK IT! STRUCTURE IT!

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- **Participation criteria:** Team of 2 to 4
- **Event duration:** 2 hrs
- **Number of rounds:** 1
- **Eligibility criteria:** 1&2 years
- **Expected number of participants:** 15 teams

Event Description:

Inspired by the iconic Mistissini Bridge in Canada, where renewable wooden Trusses replaced traditional stainless steel through innovative design, this event challenges you to think sustainably and creatively! Participants will design and build a Truss structure using only wooden sticks, glue, elastic thread, and basic tools. The goal is to construct a Truss capable of holding the maximum load before failure, showcasing strength, durability, and efficient material use. Judges will gradually apply loads to test each structure's stability, with the strongest Truss earning the highest points. Aligned with SDG 12: Responsible Consumption and Production, promoting sustainable practices by encouraging minimal material usage and creative resource management. Build smart, build strong, and showcase your engineering ingenuity!

Scoring criteria:

- **Load-Bearing Capacity (60%):** The total weight your Truss can hold before it fails. The more weight, the higher your score.
- **Time to Failure (10%):** The duration your Truss can hold the applied load before breaking. A longer time will boost your score.
- **Creative Design (30%):** Points will be awarded for unique and innovative designs that show ingenuity and a strong understanding of engineering principles. Judges will assess the efficiency of material usage (minimum mass condition) and the complexity of the design.

Event guidelines:

- Materials like cutters, glue, and sticks will be provided. Use them effectively within the set limits.
- Stick limits will be announced at the start. Stay within this number.
- Gadgets like smartphones are not allowed.
- Complete your truss within the given time.
- Except for sticks and glues participants can bring supporting items like rulers, and markers.
- Ensure your truss is self-supporting and follows shared dimensions (revealed during the event).
- Judges’ decisions will be final and binding in all aspects of the competition.