



PRAGATI ENGINEERING COLLEGE

(Autonomous)

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DEPARTMENT OF CIVIL ENGINEERING

ACTIVITY REPORT

Bridge-O-Mania (*Bridge Construction Challenge using Popsicle Sticks*)
On the Eve of National Engineers Week
Department of Civil Engineering
Pragati Engineering College (A), Surampalem

1. Introduction

On the occasion of **National Engineers Week**, the Department of Civil Engineering at Pragati Engineering College (A) organized an exciting and educational technical activity titled “**Bridge-O-Mania**”.

The event aimed to encourage innovation, teamwork, and practical application of structural engineering principles among students through a hands-on bridge construction challenge using Popsicle sticks.

2. Objective of the Event

The primary objectives of Bridge-O-Mania were:

- To enhance practical knowledge of bridge engineering concepts.
- To develop creativity and structural planning skills.
- To promote teamwork and coordination.
- To understand load distribution and structural stability.
- To celebrate National Engineers Week in a technical and innovative manner.

3. Theme of the Activity

Participants were required to design and construct a **miniature bridge model** using only Popsicle sticks and glue. The activity simulated real-world bridge construction principles such as:

- Tension and compression forces
- Truss design concepts
- Load distribution
- Structural efficiency

4. Rules and Regulations of the Competition

The following rules were strictly followed during the competition:

1. **Length of the bridge must be 30 cm.**
2. **Width of the bridge must be 10 cm.**
3. Only **Popsicle sticks and glue** were allowed.
4. No other materials such as thread, tape, metal, plastic, or supports were permitted.
5. Bridges must be self-supporting.
6. Participants were required to complete the construction within the allotted time.
7. Judging was based on:
 - Structural strength
 - Design efficiency
 - Creativity
 - Aesthetic appearance
 - Load-bearing capacity

5. Event Procedure

- Students participated in teams.
- Materials (Popsicle sticks and glue) were provided to each team.
- Teams planned their design before construction.
- Faculty members supervised the activity.
- After construction, bridges were tested for load-bearing capacity.
- The bridge sustaining the maximum load without failure was declared the winner.

6. Technical Learning Outcomes

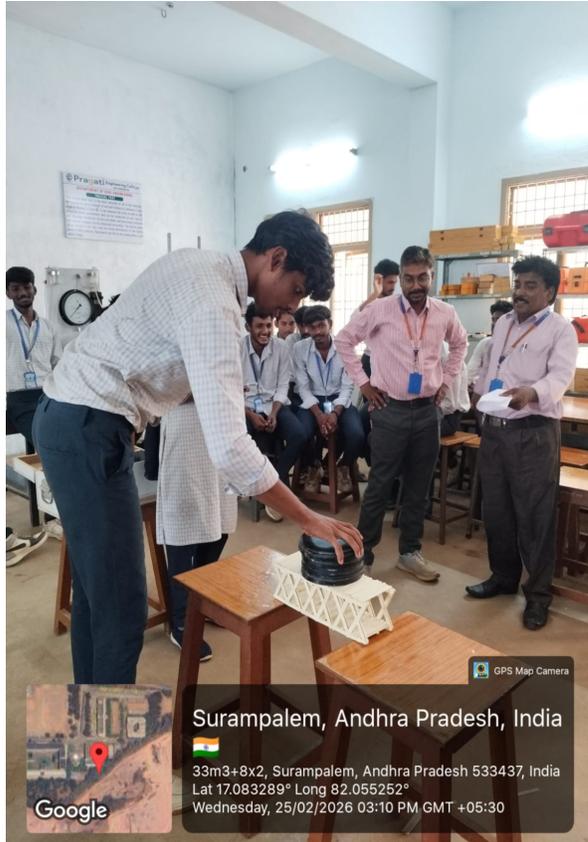
Through this activity, students gained knowledge about:

- Types of bridges (Truss, Beam, Arch)
- Importance of triangular geometry in structures
- Material efficiency in construction
- Failure mechanisms in structural elements
- Real-world engineering problem-solving

The activity helped students understand how small-scale models reflect actual civil engineering practices.

7. Participation and Response

The event witnessed enthusiastic participation from Civil Engineering students. The competition atmosphere was energetic and competitive, fostering innovation and teamwork. Students demonstrated remarkable creativity in designing various truss patterns and structural frameworks



1ST PRIZE



2ND PRIZE



WINNERS:

1ST PRIZE: A. BALA RAGHU VENKAT (24A31A0127)

2ND PRIZE: K. SHANMUKHA VINAY (24A31A0143)

8. Conclusion

Bridge-O-Mania was a successful and engaging technical activity conducted by the Department of Civil Engineering at Pragati Engineering College (A).

The event not only celebrated National Engineers Week but also strengthened students' understanding of structural engineering concepts in a practical and interactive way.

Such activities play a crucial role in bridging the gap between theoretical knowledge and practical application, making learning more effective and enjoyable.

Event Coordinator:



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