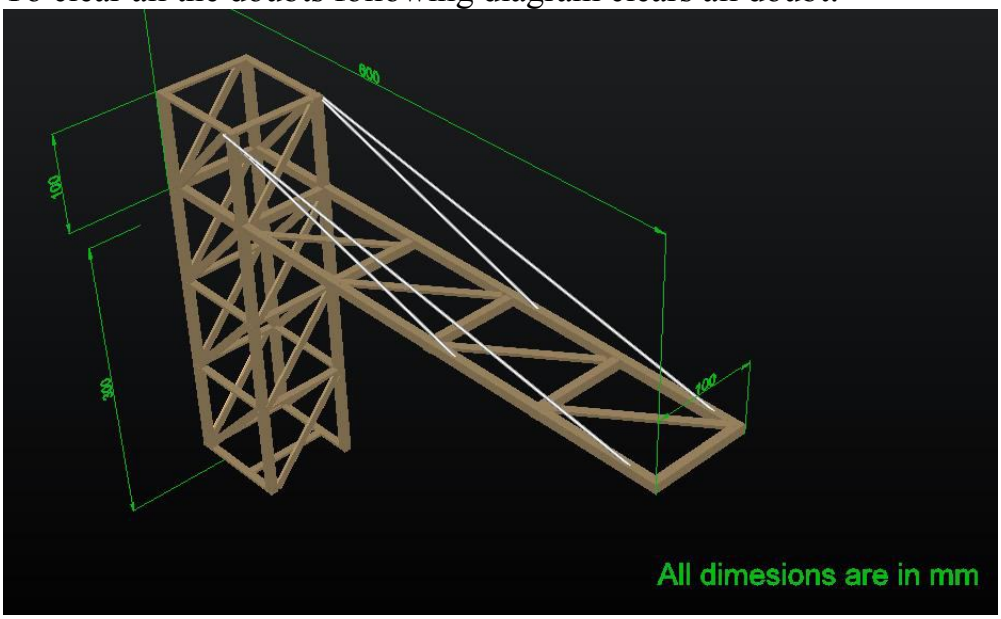
A. Objective

To build a cantilever bridge within our specifications. It must be constructed of approved materials.

B. Apparatus

- Building Materials:
    1. Popsicle sticks (For making the whole beam)
    2. Cotton threads (For making cables)
    3. Glue (For joining the popsicle sticks)
    4. Paper (For reinforcing joints)
- Dimensions:
    1. Min Span Length - 600 mm
    2. Min Span Width - 100 mm
    3. Min Column height - 300mm
    4. Min space between two parallel sticks - 50mm
    5. Only two cables can be attached on each side.
    6. The column should be compulsorily square in dimensions.
    7. The height of column above the span should be 100 mm.
    8. The beam must be able to support the load at the free end.
    9. After column span should be in one plane only.
    10. Maximum 3 sticks can be joined together.

To clear all the doubts following diagram clears all doubt:



* This is just a sample image actual model may differ

C. The Competition

1. Maximum 4 members are allowed in one team
2. Teams must submit their bridge 1/2 hour before the competition for inspection.
3. Inspection team will test that the construction rules were followed.
4. Once the bridge is in position, loads will be attached in the position indicated above. The load will hang below the bridge.
5. Beams will then be subjected to loading. Bridge failure will be considered the point at which the bridge breaks.

D. Judging and Scoring

1. $A_1 = \frac{\text{L (Load at which beam fails)}}{\text{d (Deflection at beam fails)}}$
2. $A_2 = \frac{\text{h (Height of column)}}{\text{l (Span of beam)}}$
3. Final Score $A = A_1*0.5 + A_2*0.5$.
4. In case two teams have same score then the team having higher value of A_1 will have preference over the other team.
5. The excessive use of materials at joints may lead to deduction of points in overall score.
6. Violation of any of the above stated rules may lead to disqualification.
7. The bridge with the highest score wins the event.