

# **PRODYOGIKI'19**

## **Bascule Bridge**

**"Your imagination is a weapon of mass construction. Use it"**

Exercise your engineering skills and unleash the builder in you! Give your constructing abilities wings to fly high with ISTE as we take you to a different level of engineering this year with BASCULE BRIDGE! Design your own hydraulic bridge and give it a physical shape just like a bascule bridge.

### **PROBLEM STATEMENT:**

You have to design a one-fold Hydraulic bridge by using the provided material. The span length should be appropriate so as to carry load and should lift it up to some height.



### **RULES:**

1. No. of participants in a team must not exceed 4 members.
  2. The span of hydraulic bridge must be of Popsicle sticks only and MDF sticks be can used at base, abutment & hinge point.
  3. Width of the span should be appropriate so as to provide a proper loading platform
  4. The specifications of the bridge should be as follows:
    - 13 cm – clearance width
    - 33 cm – clearance height
- Span (excluding tower width) – 46 cm  
Height of bridge when closed  $23 \pm 2$ cm

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## **MATERIALS PROVIDED:**

- Popsicle sticks & MDF sticks
- Glue Gun & Glue sticks
- Lead Pencil
- Two syringe with fitted pipe system
- Measuring Scale

## **JUDGING CRITERIA:**

- Gradual weights will be applied onto the platform and lifted to check the weight handling capacity of the bridge.
- $\text{Points} = 2[\text{Vertical Lift}] + 0.5[\text{Weight Lifted}]$
- Team having maximum points will be declared winner.