

Popsicle Stick Truss Bridge

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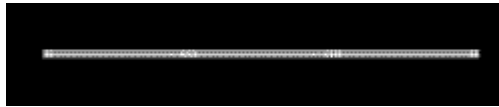
Materials

- 114 straight popsicle sticks
- 2 or 3 heavy books
- Ruler
- Glue - school or wood glue is best
- Rubber bands or small clamps (orthodontic bands are great!)
- Saw/sandpaper - a dremel tool works also

PURPOSE: To build a bridge spanning twelve inches that will hold 50 lbs. The bridge is to be made of only popsicle sticks and glue.

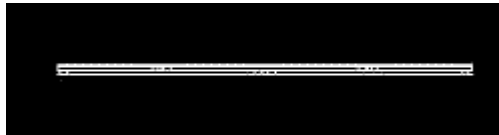
Procedure:

1. Select 9 of the sticks, break one in half and lay 3 against a ruler. Glue them together, forming a beam 3 Popsicle sticks thick and 3 long. Clamp or rubber band it together and allow to dry.



Repeat step 1 three more times - you should have 4 beams

2. Select 6 of the sticks, break one in half and lay two against a ruler. Glue them together, forming a beam 3 sticks thick and 2 long. Clamp or rubber band it and allow to dry.



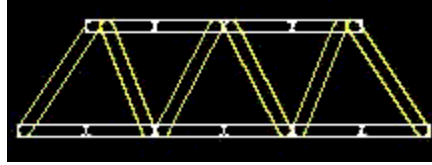
Repeat step 2 - you should have 2 beams.

3. Select 12 sticks and two beams - a long and a short one. Lay them on a table with the flat part of the beams down. Glue 6 sticks on top in a triangular pattern. Then glue 6 on the underside in the same fashion. Press with books.

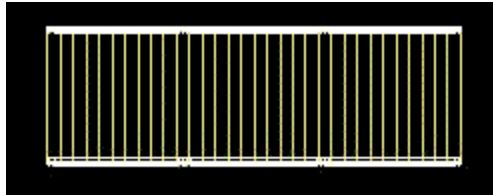
Repeat step 3 - you should have 2 walls.

4. Sand or cut the extra off of the walls

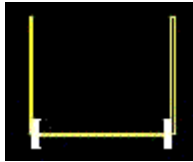
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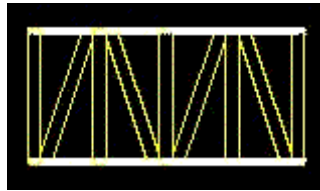
5. Lay the 2 remaining beams on a table. Glue 33 Popsicle sticks onto them, forming the road. Press with books.



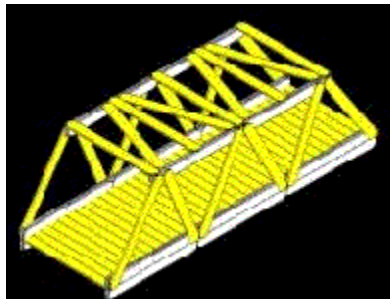
6. Glue the 2 walls at a right angle onto the road. Hold the walls in place until the glue sets.



7. Glue crossbeams on top of the walls. You will use a total of 9 sticks. Allow to dry.



8. Smear extra glue on the joint between the wall and the road. This will reinforce the joint.



Allow to dry, and YOU'RE DONE!