

What's your science fair project?

B 1 D 3 F 5 H 7

Bridges to the Breaking Point

Abstract of Bridges to the Breaking Point

In this experiment deflection refers to the difference in distance between a bridge with no load and a bridge with a load measured in the middle.

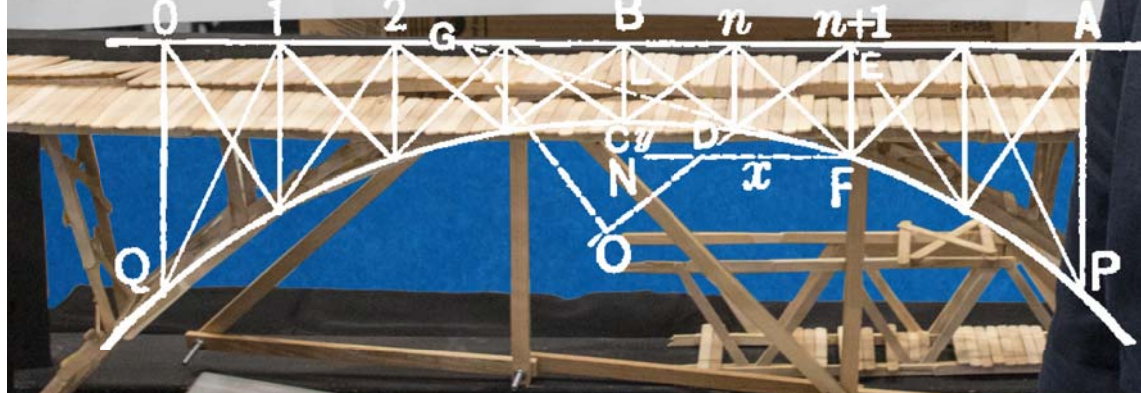
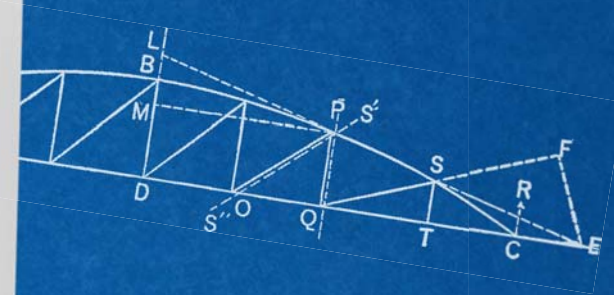


Observations

When I was testing the bridges I noticed that the arch bridge was the strongest out of the three bridges. The arch bridge made a cracking sound 13 times before finally breaking. Sometimes there would be a crack right away and other times it would happen 20 seconds after the weights were added. The arch bridge had a very low deflection.

Interpretations

This could be because the only support to hold the bridge up was two beams (1 x 1 & 1 x 2 craft sticks). The arch bridge had a medium deflection probably because there were two supports that the beam bridge did not use as much as the arch bridge. The beam bridge had the most deflection because it had to be supported by two beams (1 x 1 & 1 x 2 craft sticks). This is probably the reason it broke at only 100 grams when the arch bridge had up to 200.



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