



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Diego R. Munoz-Cowan	Project Number J0221
Project Title Truss Bridge Tests	
Abstract Objectives/Goals My objective is to learn which of three truss bridges will support support the most mass. The three bridges are: the Baltimore (Pratt), the Lattice, and the Subdivided Warren. I believe that the Lattice bridge will support the most mass because it has the most triangular supports. Methods/Materials Three different truss bridges were constructed using toothpicks and glue. They were each built on same-sized pieces of rectangular cardboard, Each bridge had the same top, roadbed and cube platforms. Each bridge had a different truss design. I then put a rod with a cord across the roadbed of each bridge. Tied to the end of the cord was a bucket. Then, I slowly poured water into the bucket until each of the bridges collapsed and touched the cardboard base. Lastly, I weighed the bucket, rod, and cord, and added it to the weight of the water. Results The Lattice supported the most mass. The Subdivided Warren supported the second greatest amount of mass. The Baltimore (Pratt) supported the least amount of mass. Conclusions/Discussion My hypothesis was correct. The Lattice bridge supported the most mass (6575 gm.). My conclusion is that it supported the most mass because it had the most triangular supports.	
Summary Statement My project is to find out which of three different truss bridge designs is the strongest.	
Help Received My mother helped me to type the report. My father cut out the cardboard rectangles.	