



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Jacob T. Roulston	Project Number J1814
Project Title Bending Bridges	
Abstract Objectives/Goals To find which bridge, the arc bridge, the span bridge, or the cable-stayed bridge supports the most weight. Methods/Materials <ol style="list-style-type: none">1. Gather materials2. Make span bridge3. Put weights on it until it collapses and take pictures4. Record the amount of weight it holds in scientific notepad5. Make arc bridge6. Repeat steps 3 and 47. Make cable-stayed bridge8. Repeat steps 3 and 49. Repeat steps 2-8 one more time <p>Balsa wood, wood glue, exacto-knife, ruler, builders square, drill, plastic lid, pruning scissors, coping saw, picture frame vise, rasp, awl, picture hanging wire, weights (various sizes), scientific note pad, pencil, and digital camera.</p> Results The results of my experiment were: The arc bridge held an average 120 ounces, the span bridge held an average of 54 ounces, and the cable-stayed bridge held an average of 52 ounces. Conclusions/Discussion My hypothesis was supported. To make my experiment better I could have used different materials on my cable-stayed bridge.	
Summary Statement I was trying to determine which bridge type supports the most weight.	
Help Received Dad helped construct bridges; Mom bought materials and helped with research.	