

Name

Group #

**Bridge Report Evaluation Sheet**

Evaluation: Included; Below, Meets, Exceeds/Best Practices)

<p><b>Introduction 10</b>                  Cover Sheet                  Problem Statement/Redefinition                  5 Concept Map for the project                  Design Brief                  5 <b>Summary</b> of final design and performance                  Specifications/Constraints</p>		
<p><b>Scientific and Engineering Background: Theory and Principles 20</b>                  5 Principles of Bridges                  5 Application of Newton's Laws to Bridge (First Law)                  5 Attach homework: Analysis of individual bridge simulator results                  5 Principles of Truss Design simulator                   This background should include the full scope of <b>your</b> research.                  if researched to a deeper level than required, show work                  (Refer to note on Project Schedule)</p>		
<p><b>Design Principles/Analysis 15</b>                  Rationale for selection of final bridge design, based on principles                  If other designs were considered,                  these should be described, compared and basis for decision stated                  Simulation data for constructed bridge</p>		
<p><b>Bridge Construction 15</b>                  5 Diagrams prior to construction                  (Accurate Drawings of constructed bridge are required.)                  Truss, top, bottom                   5 Photographs                  Narrative of special techniques for construction                  Report: weight and number of sticks used                  Clearly link details of constructed bridge to the knowledge                  learned in simulation                  5 Compromises/tradeoffs during construction with significance</p>		
<p><b>Testing/Analysis 20</b>                  5 Procedure                  5 Description of physical changes as the load was applied                  Detailed description and analysis of failure                  Compare failure with expected weakest point. If failure is different, explain.                  5 Report Strength to Weight ratio (N/g), including number of sticks                  5 Compare to class results                  Modifications for future design</p>		
<p><b>Resource/Quality of Research 10</b>                  Independent work on bridge design/principles                   Research materials (articles, books, web sites etc.) used                  For each source, list specifically the information was obtained                  No formal formatting required                  People Consulted— project was intended to be done by each group alone.                  Specific contributions of others</p>		
<p><b>Report Quality 5</b>                  Easy to follow what was done                  Logically presented/well organized                  Discussion specific, complete and focused                  Quantitative where possible                  Consistent Units</p>		
<p><b>Self Evaluation 5</b>                  5 Your opinion of the design                  Details of why the project succeeded/failed                  Changes made to improve group dynamics                  Self-evaluation: Discussion of how the device could be improved</p>		

weighings are approximate