

Build a Bridge Project

Project: Students will design, construct, and present a suspension bridge.

Materials:

Chart Paper

Wax Paper

Hot Glue

Popsicle Sticks (*optional*)

Ruler

Protractor

Twine

Rubber Bands (*optional*)

White Glue or Wood Glue

Round Toothpicks (200-400)

Timeline for Project: (Subject to change)

Day 1 – Introduction of Project and Library Research on Suspension Bridges

Day 2 – Design Bridge on Chart Paper

- Not the same as teacher's bridge
- Must be done before building

Day 3-4 – Construct Bridge

Day 5 – Complete Bridge and Create Presentation

Day 6 – Presentations and Test of Strength Contest

Criteria:

Design: (chart paper)

- Full-scale model with measurements labeled
- Half-scale model with measurements labeled

Bridge:

- Minimum length of 10 inches and maximum length of 18 inches
- Minimum height of 2 inches (not counting the pillars)
- Minimum width of 2 inches
- White glue/wood glue is to be used to construct each section
- Replica of full scale design
- Hot glue used by teacher to complete the final construction

Presentation and Paper:

- Minimum of 5 minutes to discuss your concepts and predictions
- Minimum of one-page description of the process to build your bridge

Test of Strength Contest:

- Will your bridge withstand the weight of textbooks? How many textbooks?
- You must state the number of toothpicks used to determine equality

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Grading Scale:

25 points – Design on Chart Paper

Full scale, half scale and neatly designed

25 points – Bridge

Complete bridge that is a full-scale replica of design on chart paper.

25 points – Presentation and Paper

Present your concepts in front of the class along with a one-page description of how to build your bridge.

Total Points Possible – 75

Build a Bridge Project Grade Sheet

Name: _____

Design _____/25

Bridge _____/25

Presentation/Paper _____/25

Total _____/75