

Bridge Building Challenge

The Challenge

Your Team must re-build a bridge to cross the raging waters of a canyon.

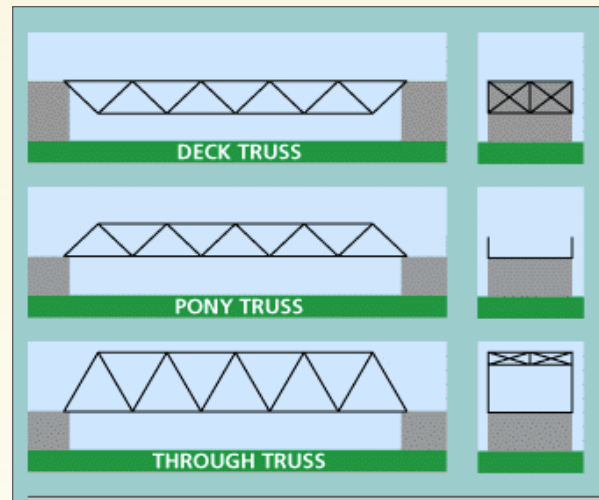
It spans 29 meters (**Scale:** 1 cm = 1 m) and must support the weight of a fully loaded train carrying loads that may weigh up to 100 tons (including the train)

Scale: 1 kg = 100 tons

The bridge must be built in 2 months, (1 Hour) and come in under budget of 750,000 \$.

Length 30 m Width 9 m

Truss Designs



Team Name

Team Member1

Team Member 2

Team Member 3

Materials and Budget

Construction kits include:

50 beams @ \$10 000 / beam

1 glue stix @ \$50 000 per stix

1 template @ \$50 000

Additional materials will only be sold when budget is verified and submitted by accountant and signed by all team members.

Construction Kit Cost

\$_____

Accounting and Expenses

Initial cost: \$_____

Additional costs:

Item _____ \$_____

Item _____ \$_____

Item _____ \$_____

Item _____ \$_____

Deductions / Credits \$_____

Final Total \$_____

Process and Result

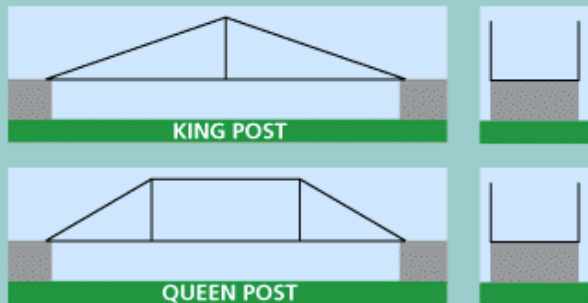
StressTesting the Bridge

Increasing amounts of weight will be suspended from the bridge until the maximum is reached for success.

Successful bridges will support 10 lbs for 5 seconds

The Ultimate Champion will be the bridge that supports the most weight before total collapse.

Winners: 15 free stixs and 1 Glue stix for part TWO of workshop; build your own bridge



Part Two of Workshop: Build Your Own

Criteria:

1 1/2 hour to build

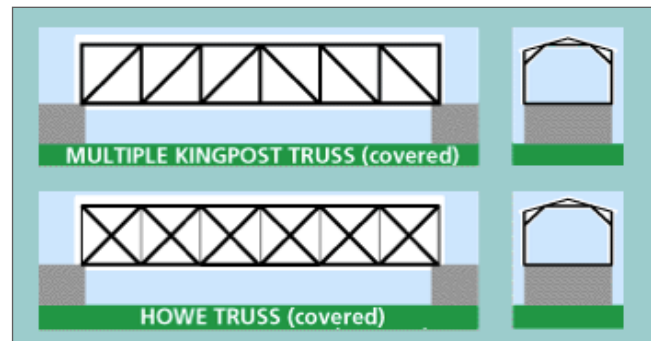
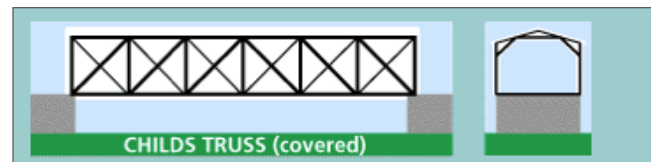
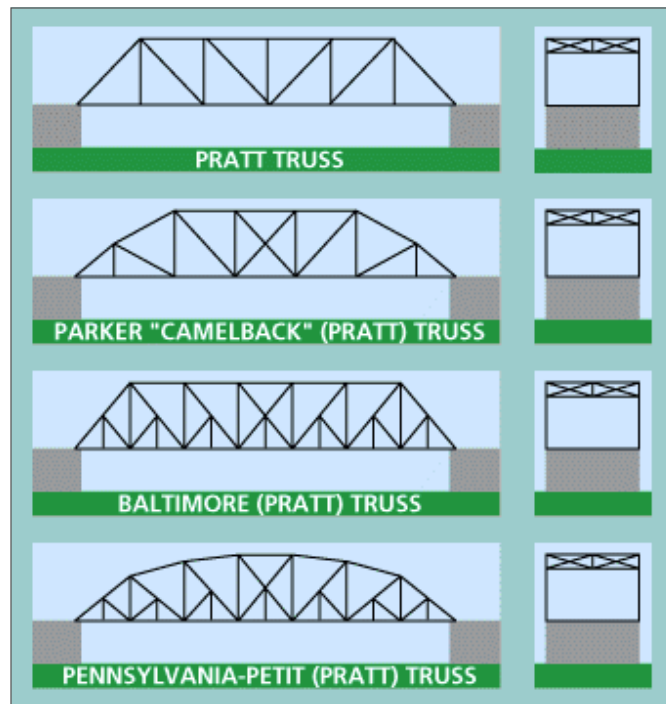
750,000\$ budget

50 stix, 1 glue stix to start with

30 cm long

20 lbs of weight for 5 seconds

Your very own Design



Research Topics:

Different Styles of Bridges

TRY iPad App: Bridge Bashers or Bridge Construction

[Bridge Builder WEB Game](#)

[Bridge Craft](#)

Truss Bridge



Challenge

Bridge Design

The architect Ayn Rand has called for a “Through Truss” design to meet the high Sutton community standards in keeping with Heritage and Esthetics of the Art-Deco era.

