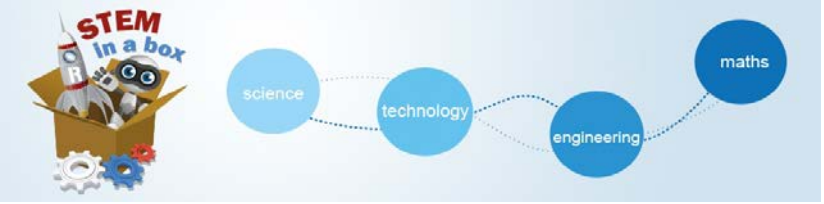


Bridge Efficiency

steminabox.com.au

$$Bridge\ Efficiency = \frac{Failure\ Load}{Mass\ of\ the\ Bridge}$$

$$Bridge\ Efficiency = \frac{\qquad}{\qquad}$$

Ensure same units

$$Bridge\ Efficiency =$$

The bridge efficiency measures how many times its own weight it can support before structural failure. Therefore this means that this bridge was able to hold _____ times its own weight. A typical classroom bridge has a bridge efficiency of 50 to 100 with international bridge competitions returning values 300-500.

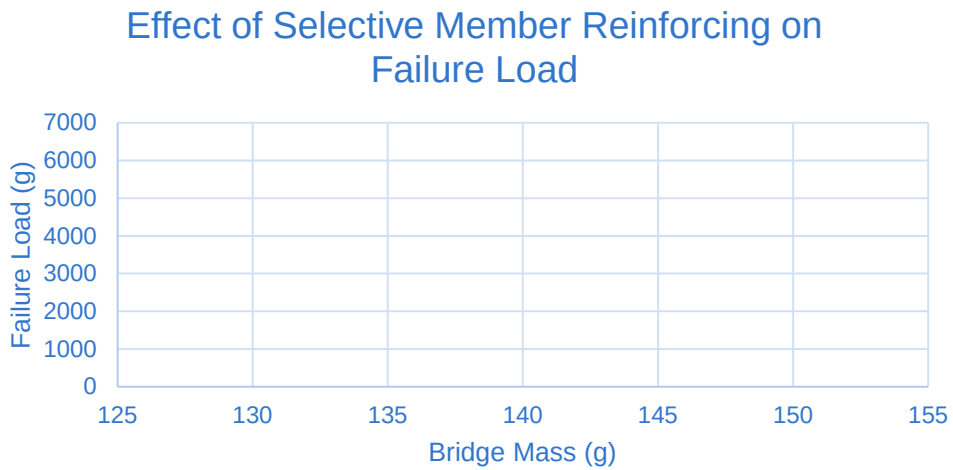
Bridge Engineering Investigation

The Effect of Selective Reinforcing of Members on Bridge Structural Performance

Aim: To determine the influence on failure load and bridge efficiency of selectively reinforcing members.

Method: Build a truss bridge from straws and plastic joints- determine failure load- selectively reinforce members based on its truss analysis structural model and retest- repeat.

Results Table – ……..Truss Bridge			
Bridge Characteristics	Mass (g)	Faliure Load (g)	Bridge Efficiency



Bridge Sketch

Truss Structural Analysis Model

Discussion:

Conclusion: