

Suspension Bridge Challenge

Suspension Bridge Challenge 1:

Supplies: 2 sixty-four inch lengths of string (thread, ribbon, yarn...), a ruler, 2 large books, the same weights as yesterday and a light-weight container to hold the weights. (a paper cup, a toilet paper tube, the bottom of a small box...)

Procedure:

1. Cut one of the 64 inch pieces of string into two 24 inch pieces and one 16 inch piece of string.
2. Tie each of the 24 inch pieces of string around the tops of each book.
3. Tie the 16 inch string from the two strings on the books.
4. Cut the second 64 inch string in half, and in half again (four 16 inch pieces)
5. Use 2 of those pieces of string to make a sling for you weight holder (save the other two for the next project)
6. Hang it from the string between the books (balance is key)
7. Add weights slowly one at a time
8. Count the weights as you add them
9. When the bridge becomes unsafe or collapses, record the number of weights the bridge held right before the collapse.

Suspension Bridge 1: Draw a picture of your bridge just before it fell or insert a photograph
Number of Weights Held:

Suspension Bridge Challenge 2:

Supplies: 1 sixty-four inch lengths of string (thread, ribbon, yarn...), the two 16 inch pieces of string left over from Challenge 1 and all the other supplies from before ~ same ruler, books, weights and light-weight container to hold the weights.

Procedure:

1. Remove strings from part one and discard.
2. Tape one end of the string down securely (about 15 inches from one book tower)
3. Put the string over the book towers still a foot apart.
4. Tape the other end of the down securely on the other side. The height of your books may make some of the string unnecessary
5. Suspend your weight holder between the books
6. Add weights slowly one at a time
7. Count the weights as you add them ~ this is a much stronger bridge than the first one.
8. When the bridge becomes unsafe or collapses, record the number of weights the bridge held right before the collapse.

Suspension Bridge 2: Draw a picture of your bridge just before it fell or insert a photograph
Number of Weights Held: