Beam Bridges

Advantages & Disadvantages: (for each, circle one)

Inexpensive or Moderate Cost or Expensive

Easy to Build or Moderate to Build or Hard to Build

Large Span or Medium Span or Small Span

What other advantages do beam bridges have?

________________________________________

________________________________________

________________________________________

Draw arrows for the forces in compression (KeyEvent) and forces in tension (KeyEvent) on the beam bridge below.

Suspension Bridges

Advantages & Disadvantages: (for each, circle one)

Inexpensive or Moderate Cost or Expensive

Easy to Build or Moderate to Build or Hard to Build

Large Span or Medium Span or Small Span

What other advantages do suspension bridges have?

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Draw arrows for the forces in compression (KeyEvent) and forces in tension (KeyEvent) on the beam bridge below.
Arch Bridges

Advantages & Disadvantages:
(For each, circle one)

Inexpensive or Moderate Cost or Expensive

Easy to Build or Moderate to Build or Hard to Build

Large Span or Medium Span or Small Span

What other advantages do arch bridges have?

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Draw arrows for the forces in compression (↔↔) and forces in tension (←→) on the beam bridge below.

Trusses

Why would you want to use a truss on a bridge?

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How many extra supports does it take to make a square truss stable?

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What shapes do the extra supports create?

________________________________________

What shape truss pattern is the most stable?
(circle one)

Triangle or Square or Pentagon
Your Drinking Straw Beam Bridge

Feel free to sketch a diagram of your bridge design in the space below.

Your bridge must:

– Span the gap below (5 inches)
– Be freestanding (it cannot be taped to the tables)
– Come in on budget (use only the materials provided)
– Support at least the bucket