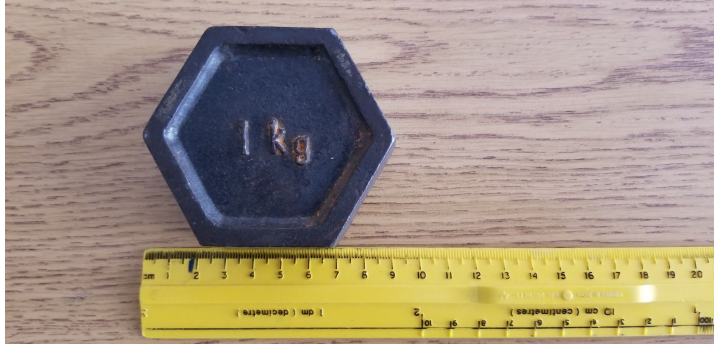


## Bridge Building Assignment

Goal: To build a bridge that will hold a 1kg weight (at minimum)

You can choose the type of bridge: Arch, Beam, Suspension, Cantilever, Cable-Stayed, Truss, Draw Bridge or another type that you are interested in building.

|  |   |
|--|---|
| <b>Materials.</b><br>I am open to ideas about other materials. Just check with me first.   | Popsicle Sticks<br>Glue<br>String/Yarn  |
| <b>Span/Height</b>   | The bridge must be able to cover a 30 cm gap. The height is up to you. The deck of the bridge must be wide enough to support the following size of weight. (10cm). The goal is to hold as many of these weights as possible.<br> |
| <b>Cost</b> - This cost is imaginary. However, imagine that you are building a bridge for the government. The taxpayers would prefer you not spend too much money. | \$25 000 per stick<br>\$1000 per string<br>\$10 000 total for glue  |
| <b>Due Date</b>  | Friday March 13th   |

The project will be completed at home. You will bring it to school on the due date and we will test them before we head out for March Break.

### **Oral Component:**

You will need to explain the strengths and weaknesses of your bridge. You will also need to explain where the load is and describe the tension and compression forces that are acting on your bridge. You will do this part as you present to the class. Science vocabulary will be used.

### **Math Component:**

You will come to school on March 8th with the total cost of your bridge already calculated. You will need to show your work.

Check out the class website for links to bridge building websites