

## Forces on a Bridge

### Vocabulary

Load – can be the weight of something that works with gravity to decrease structural reliability

Tension – the stretching of an object

Compression – a pushing force that “squishes”

1. How much load (weight) do you think the cup will hold before the single strand of spaghetti breaks?

Result:

2. How much load (weight) do you think the cup will hold before the bundle of 5 spaghetti strands break? Will it be approximately five times the amount a single strand could hold, or ?

Result:

Were the first strands that broke at the top or the bottom of the bundle?

3. How much load (weight) do you think the cup will hold before the bundle of 10 spaghetti strands break?

Result:

4. Are the strands that fracture first at the top or bottom of the bundle?
5. Are they in tension or compression? Explain why you think that.

### **Extension**

Explain what you did and the results.