Name:_____

Exploring Counterweights

Hold the mystery box on one end of the pulley to keep it from falling.

Place a single weight in the cup and let go of the box. What happens when you let go?

Now hold up the box again and place a lot of weights in the cup. What happens when you let go?

Explore different amounts of weight in the cup to see if you can balance the box exactly. What happens when you let go of the box? What happens if you move the box while the weights are balanced?

How much mass did you need to balance the mystery box? What does this mean the weight of your mystery box was (Recall $F_g = mg, 1g = .001\ kg$, assume g=10m/s^2).