

## **Lab 1 Physics 15c: Oscillating Systems Worksheet**

**Goal:** Increase understanding of oscillating systems and be creative

### **Tasks for the lab:**

1. Measure a resonant frequency of an oscillating system using two different techniques and compare the results. Try to explain any discrepancies.
2. Measure the Q of the system.
3. Attempt to maximize the Q
4. Attempt to shift the resonant frequency by at least 50%

Note: RLC circuits and pendulums are not to be used given what you have already done in 15a and 15b.

**Please list the names of the people in your group**

### **Sections to be completed**

1. **Describe your system including a description for the restoring force that allows the system to oscillate (1 sentence is ok)**
2. **How did you measure the resonant frequency and what was your result? (1-3 sentences are ok)**
3. **How did you measure the Q of your system and what was your result? (1-2 sentences is ok)**
4. **What did you do to change Q? How well did it work? (1-2 sentences is ok)**
5. **How did you change the resonance frequency? How much did the frequency shift? (1-2 sentences is ok)**