Mr. Abbott Period One Group A 9/12/13

Lab #1 – Effect of Mass on the Period of a Pendulum

Problem: How does changing the mass of a pendulum bob change the period of a pendulum?

Hypothesis: If I increase the mass of the bob then the period of the pendulum will decrease because the pendulum will have more kinetic energy.

Materials:

- Ring Stand
- String
- Paper Clip
- Protractor
- Fun Tack
- Washers for Bob
- Stopwatch
- Digital Balance

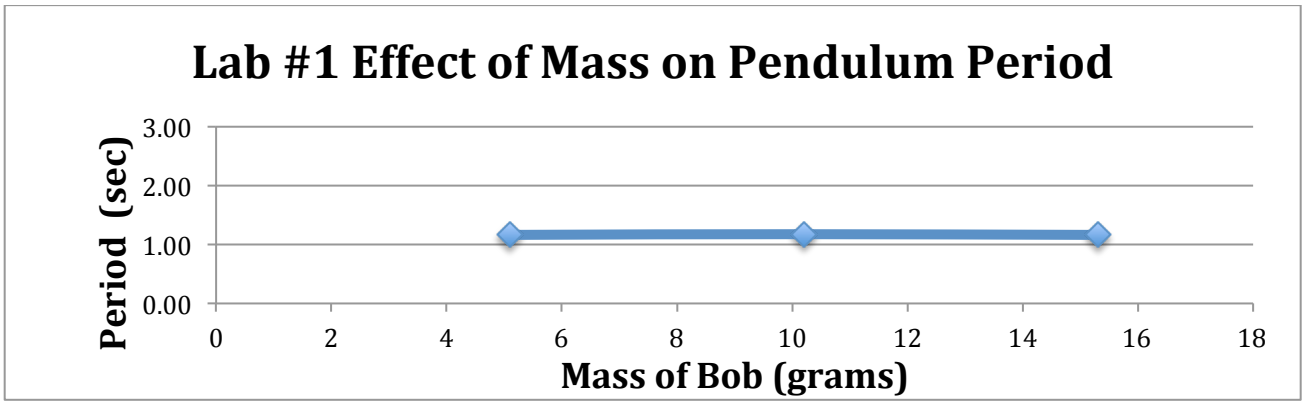
Procedure:

1. Set up the ring stand and tie a string to the ring.
2. Tie the paper clip to the bottom of the string so it hangs just above the base of the ring stand.
3. Use the balance to record the mass of 3 washers.
4 Place the 3 washers on the paper clip to act as the bob.
5. etc……..
6.
7.

Observations/Data:

		Time for 10 Oscillations (sec)				
Number of Washers	Mass (grams)	Trial 1 (sec)	Trial 2 (sec)	Trial 3 (sec)	Average Time	Period (sec) Time for one Oscillation
3	5.1	11.47	11.92	11.63	11.67	1.17
6	10.2	11.57	11.76	11.94	11.76	1.18
9	15.3	11.23	12.36	11.32	11.64	1.16

Length of String is Constant 19.4 cm Displacement Angle is Constant 45 °



Conclusion:

Increasing the mass of the pendulum did not change the period of the pendulum.