

Purpose

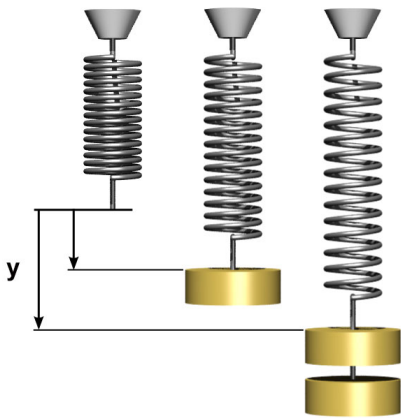
1. Understand the concepts of Hooke's Law and spring constants.
2. Suspend a series of masses from a spring and measure the displacement caused by each.
3. Use iSENSE to visualize the data and draw conclusions.

Materials

Springs
Masses
Rulers

Method

1. Suspend a spring from a fixed point, so that the coiled part hangs freely, without touching the supporting structure.
2. Hang a series of masses from the spring, recording the mass and displacement for each trial in the Observations section.

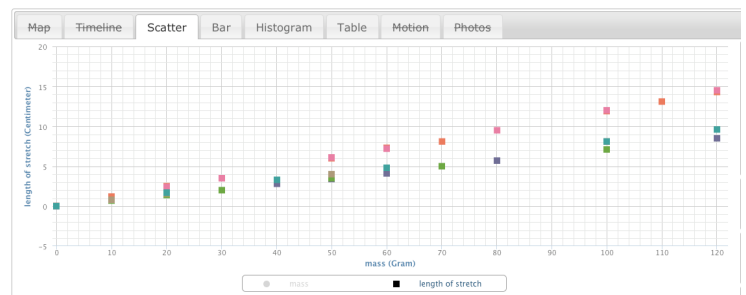


Observations

Trial	Mass (g)	Displacement (cm)
1		
2		
3		
4		
5		
6		
7		
8		

iSENSE Analysis

1. Use the manual data entry method to enter your mass and displacement values into iSENSE.
2. Use the Scatter visualization to examine the relationship between mass and displacement.
3. Add data from other contributors and see how their distributions differ from your own.
4. Save any visualization that you find particularly interesting.



Discussion Questions

1. What do your data suggest about the relationship between mass and displacement for your particular spring?
2. How does the slope of your distribution compare to those observed by other teams?
3. What could account for differences in this regard?
4. Can you think of other science experiments that could be enhanced by sharing data on the iSENSE system?