(m), and *Lowest Point (m)*. In the first column, label the second through seventh rows *1*, *2*, *3*, *4*, *5*, and *6*. Above or below the data table, make a space to enter the value for *Initial Distance (m)*.

Spring Constant

4. Set up the Hooke's law apparatus as shown in **Figure 1.**
5. Place a rubber band around the scale at the initial resting position of the pointer, or adjust the scale or pan to read 0.0 cm. Record this position of the pointer as *Initial Spring (m)*. If you have set the scale at 0.0 cm, record 0.00 m as the initial spring position.
6. Measure the distance from the floor to the rubber band on the scale. Record this measurement in the second data table under *Initial Distance (m)*. This distance must remain constant throughout the lab.
7. Find a mass that will stretch the spring so that the pointer moves approximately one-quarter of the way down the scale.
8. Record the value of the mass. Also record the position of the pointer under *Stretched Spring* in the data table.
9. Perform several trials with increasing masses until the spring stretches to the bottom of the scale. Record the mass and the position of the pointer for each trial.

Conservation of Mechanical Energy

10. Find a mass that will stretch the spring to about twice its original length. Record the mass in the second data table. Leave the mass in place on the pan.

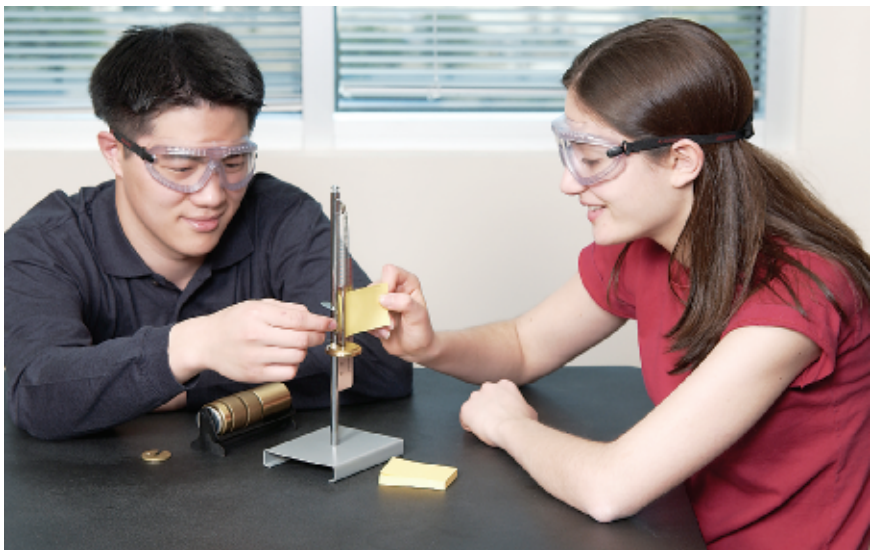

Figure 1

Step 5: If the scale is adjusted to read 0.0 cm, record 0.00 m as the initial spring length in your data table.

Step 7: In this part of the lab, you will collect data to find the spring constant of the spring.

Step 10: In this part of the lab, you will oscillate a mass on the spring to find out whether mechanical energy is conserved.