

Lab #5 – I'm with the (elastic) band

Purpose: To determine the spring constant (k) value of a rubber band using conservation of mechanical energy.

1. Spring a rubber band. Measure the amount you stretch it before you let go and height it reaches after you let go.
2. Use this height to calculate its final potential energy.
3. Use the final potential energy to calculate its initial velocity.
4. Use your data to calculate the spring constant.
5. Use a newton scale and stretch your rubber band the same amount you did for the spring and calculate the spring constant. How well do your calculations from #4 and 5 match (Find the percentage error, using #5 as the "measured" value.)

Now.... Take these rather skimpy instructions to write an AWESOME, DETAILED lab report. Refer back to your handout from the beginning of the semester. This will be graded under planning/conducting (your procedure and how well you detail it) and evaluating (calculating and explaining your results, error analysis)