

Alternative Gravity + Spring Experiment

In this folder I've posted a document, `data-crunching.pdf`, where I demonstrate parsing and plotting some data I collected for the gravity+spring experiment. On the last page of the doc I plot the kinetic, gravitational, and elastic energy of the system and compare it to the position vs time graph, so you can see the energy being exchanged during the motion of the system. You may use these plots in your report to answer the questions. I've also attached the full data file (note it's raw data from Capstone) so you can make the plots yourself if you want. Note this is not the same data as in the `data.xlsx` file in the main folder, so the values will be different.

Don't concern yourself with manually computing the values of energy at the high/low/mid points of the motion. I'm more interested in your analysis of how energy is exchanged at these points. Be as detailed as you can.

Bonus Exercise

Go and check out the interactive simulation at this link:

<https://phet.colorado.edu/en/simulation/masses-and-springs>

Mess around with the simulation. Report your findings. Extra points may be given.