Physics Home Learning Plan for April 6th – April 10th

Goals (for this week and next):

1. Conduct Part 2 of an experiment about spring force, elastic potential energy, and conservation of energy
2. Engage with/practice/demonstrate the skill of Technology by developing and executing an experiment at home (Part 2 of the portfolio eligible Technology assessment is this week. Part 1 was last week)

Tasks for the week: (students are STRONGLY encouraged to spread the work out as it's laid out in the table below, both for the sense of having a routine for the week and so as to keep the workload manageable and make sure they're being careful and documenting well)

All week	• Perform tests on ONE spring-like thing (the one that tests last week showed to be the most spring-like of the three tested) involving converting from Gravitational to Elastic Potential Energy and from Elastic Potential energy to Gravitational Potential or Kinetic Energy • The same OneNote page from last week lays all of this out and provides an organizational structure for documenting the work (with pictures and/or digital work) • *Students who didn't experiment last week can still get caught up! (And are encouraged to!)* • Collaboration/consultation with up to two other students is encouraged but not required.
Monday	1. Introduction to this week and Part 2 of the Technology assessment • Option 1: "come to class" in Teams at 2:30 PM (**notice new time!**) • Option 2: watch a video of JohnBo explaining the assessment • Option 3: read about the Assessment in OneNote 2. Use the conservation of energy formula to predict how far the "spring" will stretch if a mass is attached and then dropped, causing the "spring" to stretch. (Instructions available.) 3. Use the same setup you used for your testing of force vs. stretch in Part 1 to test prediction. 4. Document in OneNote
Tuesday	1. Analyze the results from Monday's tests (instructions for this in OneNote) 2. Figure out a "payload" (with a known/knowable mass) to attach to the "spring" and launch with it. (Air resistance will be too significant if the "spring" is launched by itself.) 3. Do some planning/testing to figure out which of the following options can best be executed: • Stretch the "spring" a known distance (with its payload), launch it straight horizontally from a known height, measure how far it flies horizontally before hitting the ground. • Stretch the "spring" a known distance (with its payload), launch it straight up, and measure how high it goes. 4. Develop a specific procedure for the option chosen as most reliable in number 3 above. 5. Document plans in OneNote.
Wednesday	Catch-up or self-directed learning!
Thursday	1. Predict how far horizontally or upward the spring and payload will travel when pulled back (to 3 different distances) and launched. (Video/notes/class at 1:30 on this **notice new time!**) 2. Execute the procedure to test the predictions. 3. Document the testing with pictures in OneNote AND video in Flipgrid (instructions available)
Friday	1. Analyze the results. (Instructions available. Document in OneNote.) 2. Discuss overall results of testing and experimentation (in OneNote). 3. If available and interested, "come to class" at 2:30 PM (**notice new time!**) to discuss/debrief how the experimenting went

Student access to class notebook: CLICK HERE (Web view) to get to the overview page for the Home Learning weeks.

Parent access to class notebook: CLICK HERE. Once the notebook opens, select the "Home Learning" section on left.

Schedule time to talk with JohnBo: CLICK HERE (select my name from the list of teachers who are using this method).