

Physics 1021

Spring 2012 Ch.10b-11

Announcement: New lab policy

- You can get extra credit for going beyond expectations on the lab
- Any points over 100 will be assigned to that week's quiz for the group earning them
- Any points over 100 on the lab average will be applied to the final exam grade
- Will work on lab for last ½ hour of class today

Ponderable: Pole vaulter

- How much kinetic energy must a pole vaulter have in order to clear the bar for an olympic gold medal?
- Was the speed found a reasonable one?
- Can a slow person vault successfully?
- What can you tell about the properties of the pole from this problem?
- Do you need to know specific properties of the pole?

Ponderable: Spring

- User LoggerPro to draw an energy diagram for the spring.
- Download the movie and insert it into LoggerPro
<http://www.gwu.edu/~phy21bio/Ponderables/spring.mov>
- Use the point capture feature to plot x and v_x . Insert new calculated columns which calculate the potential and the kinetic energy and the total energy.
- Make a plot of PE, KE, TE as a function of x .
- What is the spring constant ?
- What is the maximum potential energy?
- What is the maximum kinetic energy?
- What is the maximum position, also called the turning point?