

Five Laws in Five Seconds for Five Dollars: Barry Feierman, Westtown School, West Chester PA

Consider a pool ball hung from the end of a soft spring attached to a Vernier Force Sensor.

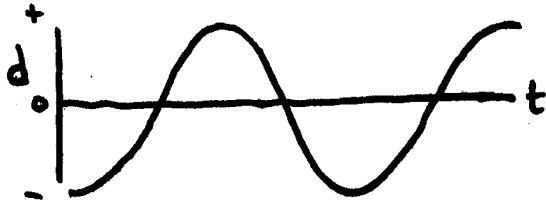
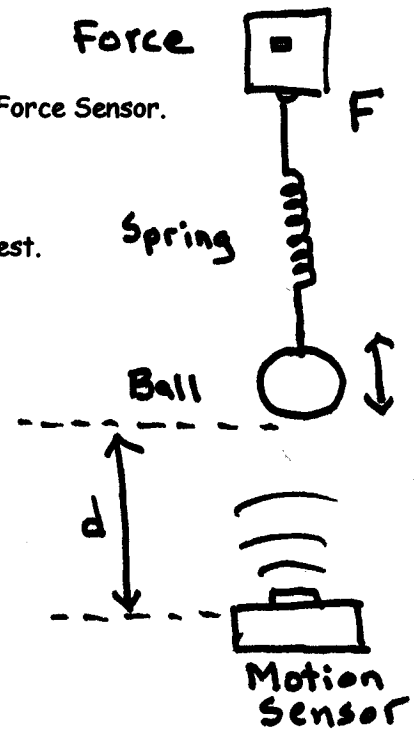
A Vernier motion sensor is below the pool ball, facing upwards.

Both the force meter and motion sensor are then zeroed when the ball is at rest.

The ball is then pulled downward a bit stretching the spring.

The ball is then released.

Predict the graphs of position, velocity, and acceleration vs. time.



the graph of Force vs. Position:



Predict the graph of Force vs. Acceleration:



Predict the graph of Potential Energy vs. Kinetic Energy



Predict the graph of PE + KE vs. time



