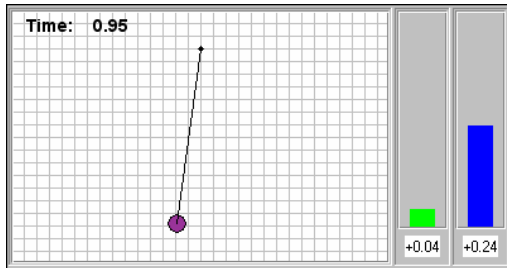


Worksheet for Exploration 16.2: Pendulum Motion and Energy



A 4-kg mass is a pendulum bob and undergoes periodic motion (**position is given in meters and time is given in seconds**). Also shown are bar graphs representing the **kinetic** and **gravitational potential** energies in joules.

Use the animation and the bar graphs to guide your answers to the following questions.

- a. What is the period of the motion?
 - i. Make sure you allow the pendulum to swing through several oscillations.

T= _____

- b. What is the amplitude of the motion (in radians)?

Amplitude= _____

- c. From the motion and the bar chart, how do you know energy is conserved?

- d. Is this simple harmonic motion?