

# **Energy Wrap up**

10/9/15

# Pendulums

The screenshot shows the PhET Pendulum Lab 2.03 simulation. The main area features a pendulum with a blue bob and a black string, suspended from a pivot point. A vertical dashed line indicates the equilibrium position. A curved scale is visible behind the pendulum, and a vertical ruler on the left side is marked from 0 to 180 cm. A 'pause/play' button is located at the bottom center.

The right-hand control panel is highlighted with a blue border and contains the following settings:

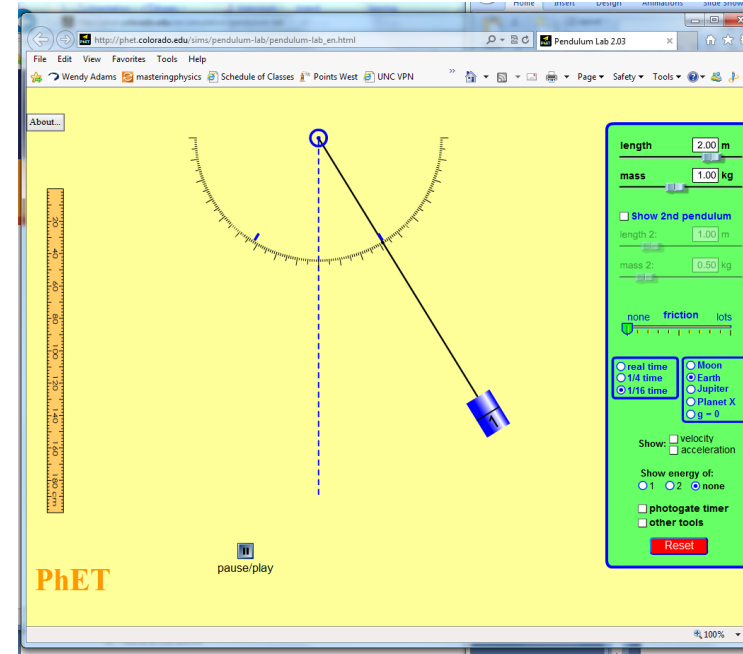
- length:** 2.00 m
- mass:** 1.00 kg
- Show 2nd pendulum
- length 2:** 1.00 m
- mass 2:** 0.50 kg
- friction:** A slider set to 'none' (between 'none' and 'lots').
- Real-time settings:**
  - real time
  - 1/4 time
  - 1/16 time
- Gravity settings:**
  - Moon
  - Earth
  - Jupiter
  - Planet X
  - g = 0
- Show:**
  - velocity
  - acceleration
- Show energy of:**
  - 1
  - 2
  - none
- photogate timer
- other tools
- Reset** button

At the bottom left, the PhET logo is displayed. The bottom right corner shows a zoom level of 100%.

# Pendulums

A pendulum is pulled the side as shown,  
it's energy before you let it go is

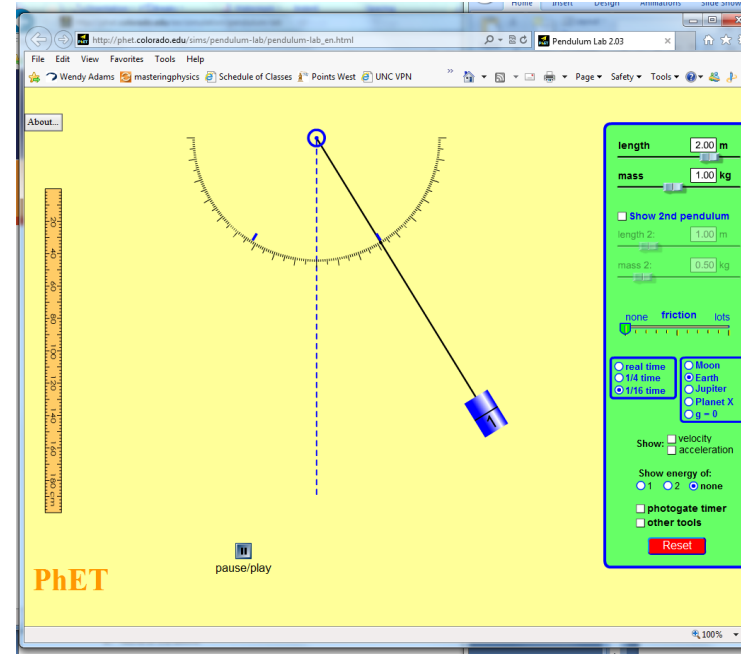
- A. All potential energy
- B. All kinetic energy
- C. A combination of both



# Pendulums

A pendulum is pulled the side as shown,  
it's energy before you let it go is

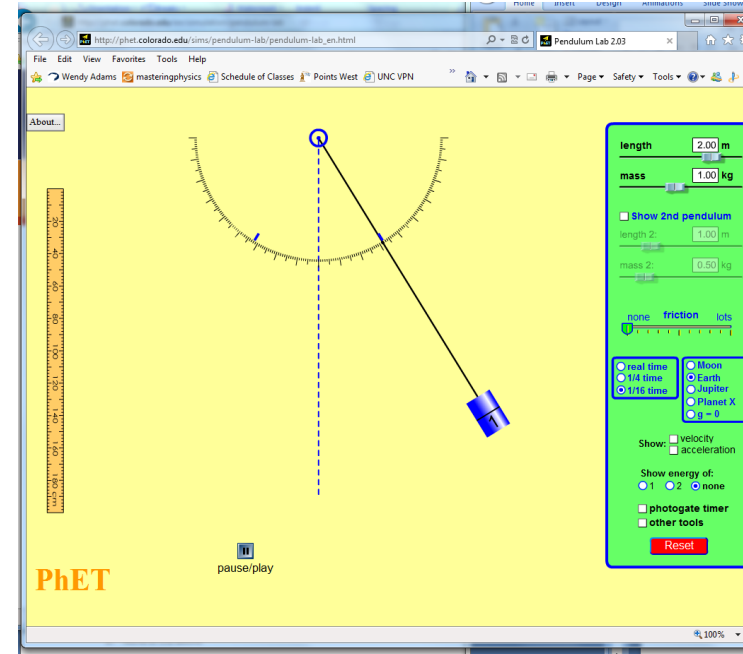
- A. All potential energy**
- B. All kinetic energy
- C. A combination of both



# Pendulums

A pendulum is pulled the side as shown, its energy at its lowest point (dotted line) is

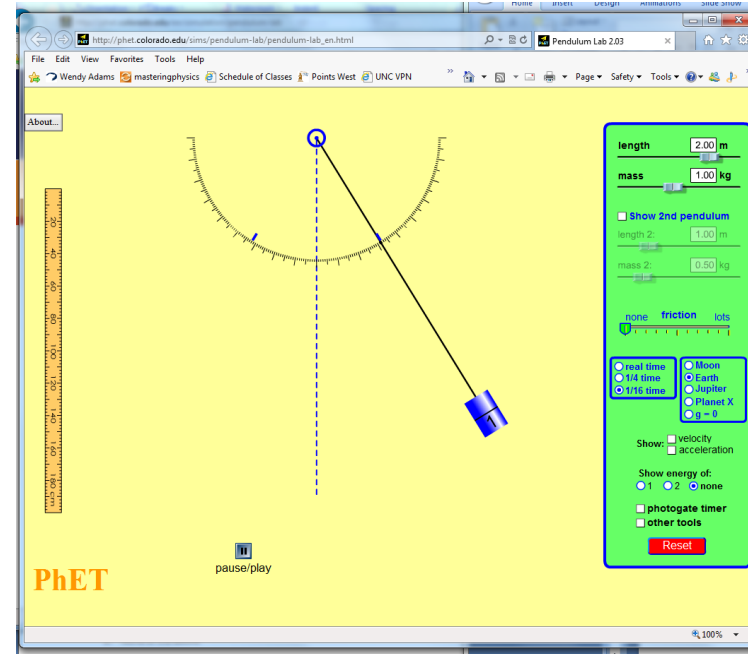
- A. All potential energy
- B. All kinetic energy
- C. A combination of both



# Pendulums

A pendulum is pulled the side as shown, its energy at its lowest point (dotted line) is

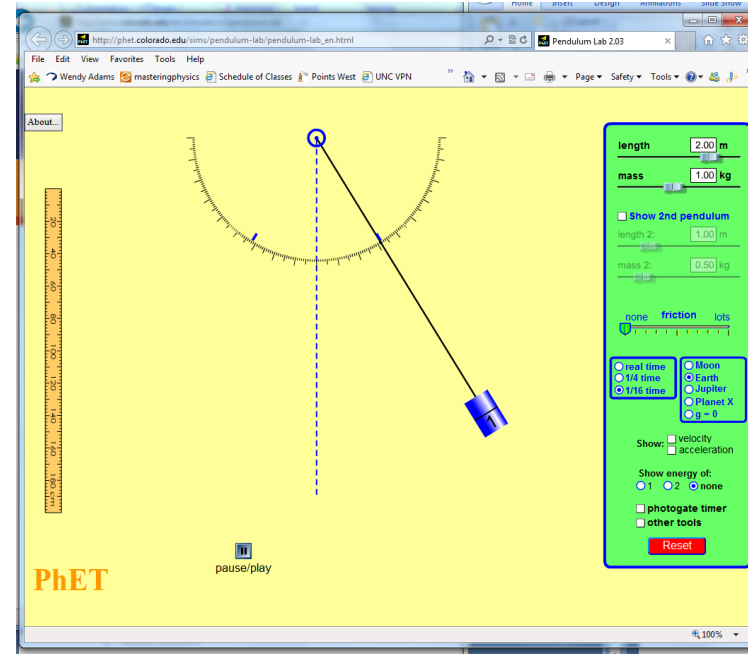
- A. All potential energy
- B. All kinetic energy**
- C. A combination of both



# Pendulums

A pendulum is pulled the side as shown, it's energy at the furthest point to the left side is

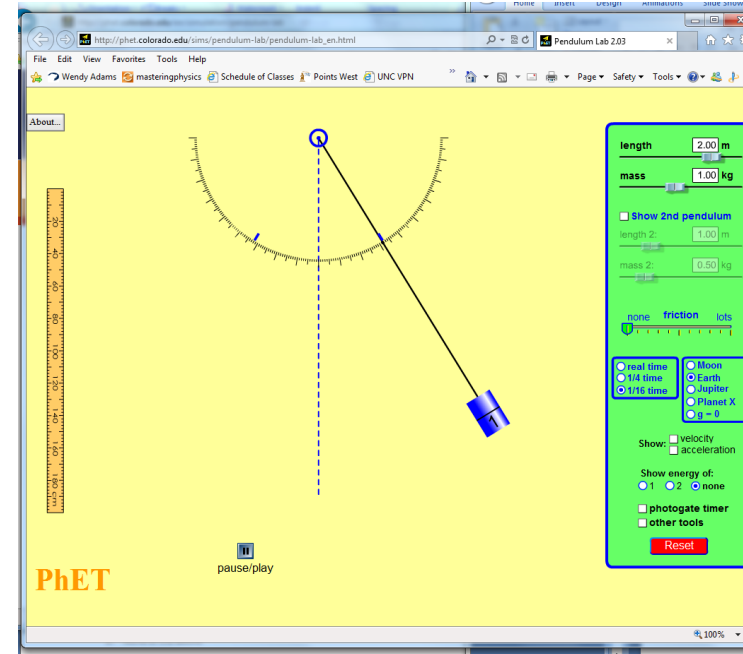
- A. All potential energy
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- C. A combination of both



# Pendulums

A pendulum is pulled the side as shown, it's energy at the furthest point to the left side is

- A. All potential energy
- B. All kinetic energy
- C. A combination of both

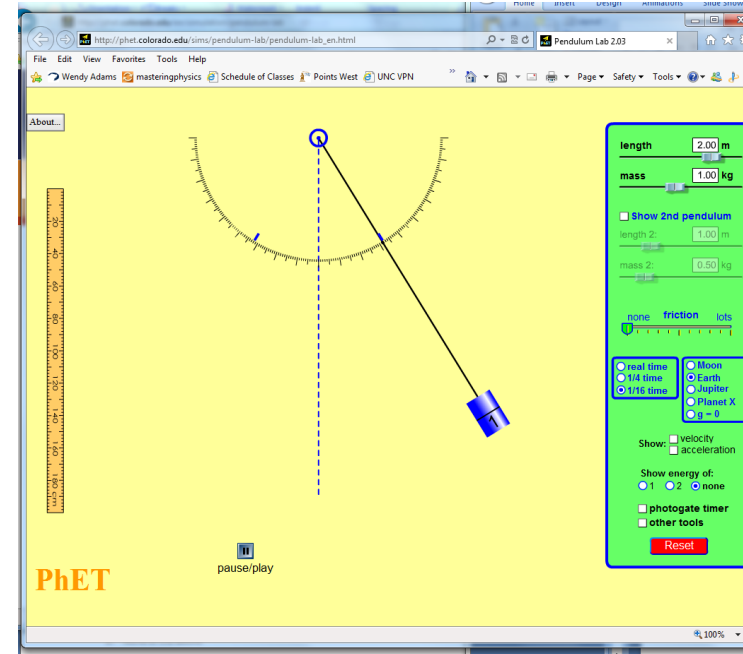




# Pendulums

A pendulum is pulled the side as shown,  
it's energy half way between the start  
and the bottom is

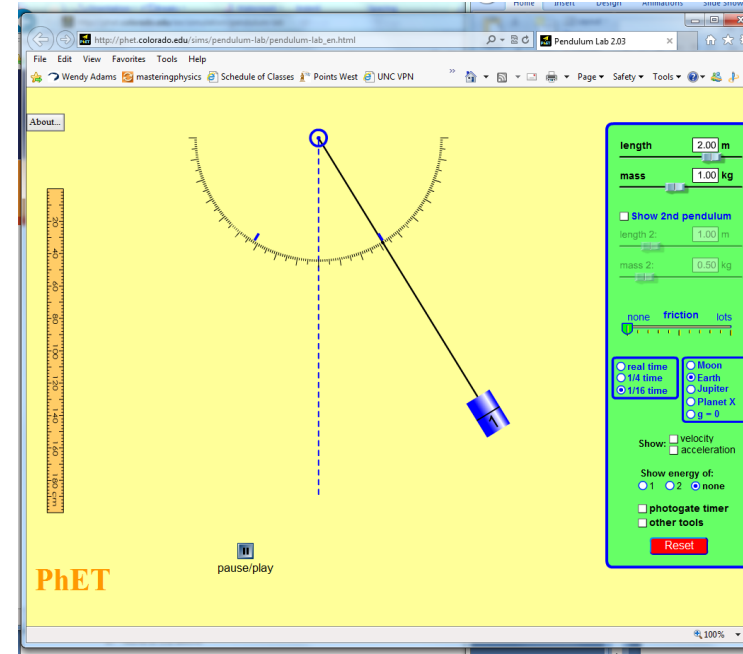
- A. All potential energy
- B. All kinetic energy
- C. A combination of both



# Pendulums

A pendulum is pulled the side as shown, its energy half way between the start and the bottom is

- A. All potential energy
- B. All kinetic energy
- C. A combination of both**

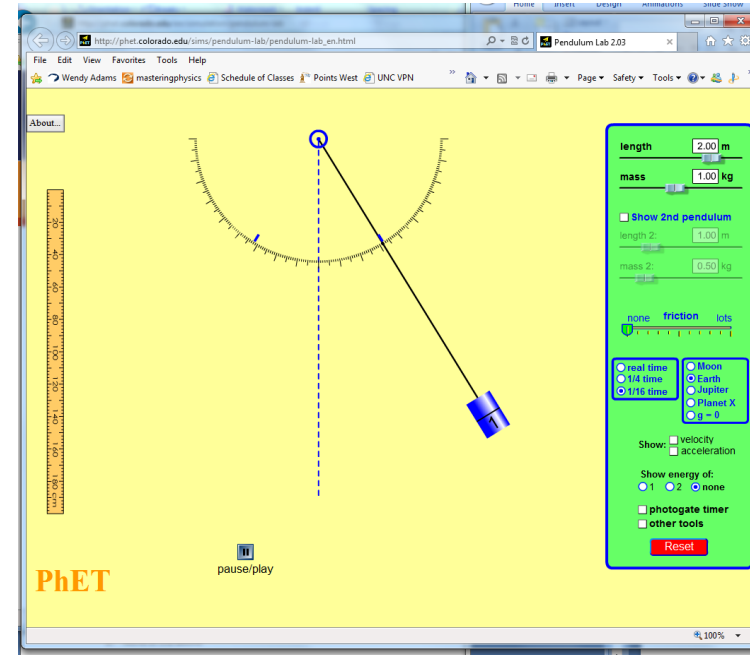


# Pendulums

A pendulum is pulled the side as shown,

The highest point that it will reach on the left hand side is

- A. Exactly as high as it starts
- B. Almost as high as it starts
- C. Higher than it starts
- D. Could be more than one of the above options.

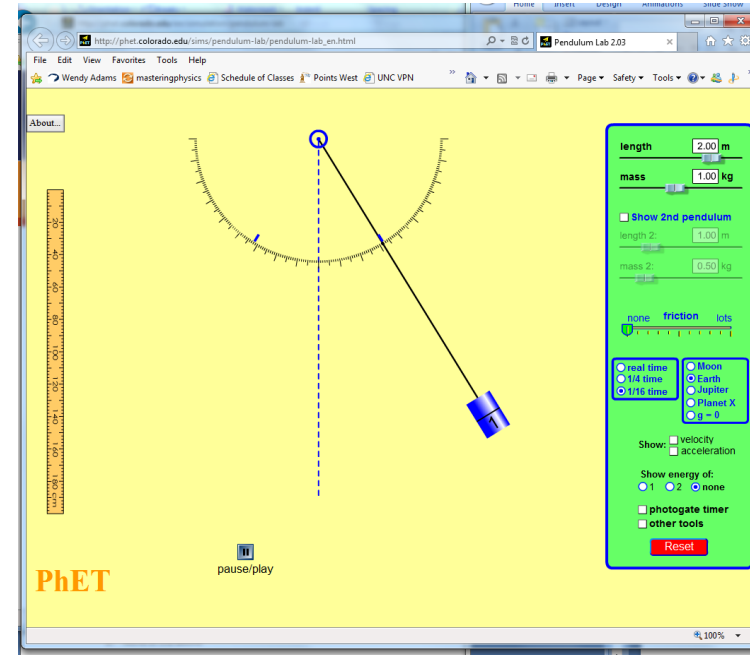


# Pendulums

A pendulum is pulled the side as shown,

The highest point that it will reach on the left hand side is

- A. Exactly as high as it starts**
- B. Almost as high as it starts
- C. Higher than it starts
- D. Could be more than one of the above options.

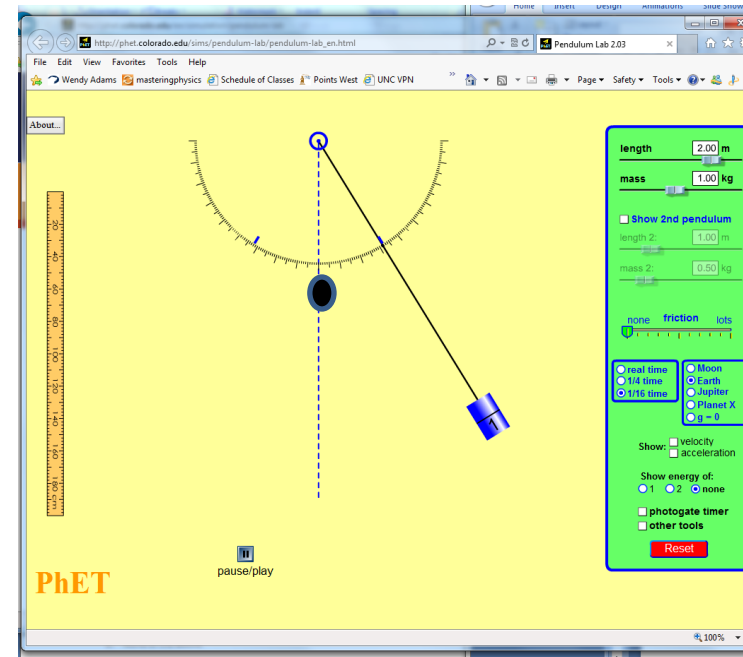


# Pendulums

A pendulum is pulled the side as shown, and a fat bar is stuck in the middle as shown to block the string.

The highest point that it will reach on the left hand side is

- A. Exactly as high as it starts
- B. Almost as high as it starts
- C. Higher than it starts
- D. Could be more than one of the above options.

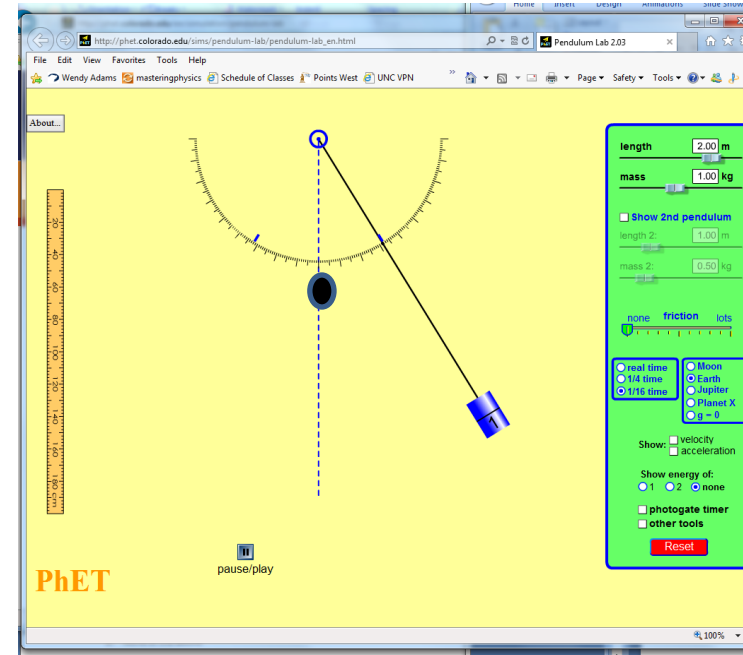


# Pendulums

A pendulum is pulled the side as shown, and a fat bar is stuck in the middle as shown to block the string.

The highest point that it will reach on the left hand side is

- A. Exactly as high as it starts
- B. Almost as high as it starts
- C. Higher than it starts
- D. Could be more than one of the above options.



# Pendulum I

