

**PROCEDURE:**

- Use the slider at the bottom of the screen to find the period of the three objects' oscillation
- Use the meter stick in the video to find the radius of the circle traveled by big bird.
- Answer the questions below.

**MEASUREMENTS:**

1. What is the period of the oscillation for the three objects? (Note: the period for an object moving in a circle is the time that it takes to make one full revolution)

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2. Use the meterstick in the video. What is the radius of the circle traveled by Big Bird?

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**APPLY:**

3. What is the frequency of the oscillation for the three objects?

4. The spring constant of the spring system is 3.86 N/m. Determine the mass of the cart.

5. What is the length of the pendulum (assume that this experiment was done on earth where  $g = 9.8 \text{ m/s}^2$ )

6. Determine the average SPEED of big bird on the edge of the plate. This is called the TANGENTIAL VELOCITY!

*Hint: How far does it travel in one period? Divide distance over time to get speed!*

