Physics Aviary | Momentum Conservation to Oscillation

☐ *Success Criteria: I can accurately analyze and calculate the kinetic energy, momentum, and speed of objects in a collision scenario, determine the resulting amplitude and period of oscillation, and evaluate the mechanical energy lost during the process.*

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Getting Started: Select one problem from the *Physics Aviary | Momentum Conservation to Oscillation*

Step 1: In the picture below fill in all the information about the system before the pellet collides with the hovercraft

Step 2: Show your calculations for the kinetic energy and the momentum of the pellet before it collides with the hovercraft.

Step 3: Show the calculations required for finding the speed and kinetic energy of the system immediately after the collision.

Step 4: Show the calculations to find the amplitude (in cm) and the period of oscillation.

Step 5: Show the calculations that you did to find the mechanical energy lost when the pellet became embedded into the hovercraft.

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Step 6: Enter all your answers into the program to verify accuracy and confirm that each step was completed correctly. Include a screenshot below showing successful completion, including your name and serial number.