Data Work Sheet

In this lab, you will design an experiment to observe the inelastic collision of a ballistic pendulum.

**[Equipment]**

- Ballistic Pendulum
- Launcher and a steel ball
- Motion sensor
- Meter stick, Balance

The following is the suggested outline of the lab. Make a plan for your experiment and describe procedures as you conduct it. Make tables for your data.

[A to B]
Measure the velocity of m1 before the collision.
Measure the velocity of (m1 + m2) after the collision.
Test the momentum conservation before and after the collision.
Test the total energy conservation before and after the collision.
Compare the kinetic energy at A and B before and after the collision.

[B to C]
Using the initial velocity v1i and masses, predict the final velocity v_f theory.
Using the initial velocity v1i, predict the maximum height, h_theory.
Measure the maximum height h, h_measured.
Compare the total energy at B and C.

[Plan and Set up (block diagram)]

[Procedure] and [Data] Attach extra pages for procedure and Data.