Name: _____
Number: _____
Date: ____/____/____

Unit 2: Newtonian Mechanics – Kinematics in Two Dimensions
LAB: Horizontal Ranges Analysis of Upwardly-Launched Projectiles

Objective:

- Generate and test a hypothesis predicting the relationship between launch angle and horizontal range for an upwardly-launched projectile.
    - State your hypothesis:

Background:

- How did you inform your hypothesis? (In addition to narratively explaining your rationale for your hypothesis, show at least one calculation for predicted launch range to show how you determined your optimal launch angle. See the data table for guidance.)

Equipment:

- PASCO projectile launcher with photogates
- Meterstick or measuring tape
- Video taken on your phone or the teacher iPad if desired

Procedure: State the steps in your procedure.

- Note: Do multiple trials (at least five) for each launch angle. Use the median value. Staple a paper with the data for each trial to this lab report. Be sure it is clearly labeled.

Predicted Launch Ranges and Actual Launch Range Data:

- Note: Remember to identify the uncertainty of the measurements.

Angle	Predicted Launch Range	Actual Launch Range

Graphical Representation of Data:

Conclusion:

- Was your hypothesis supported?

- Generate a possible explanation for your results.

- Identify sources of possible experimental error.