Projectile Motion Lab

Names_____________

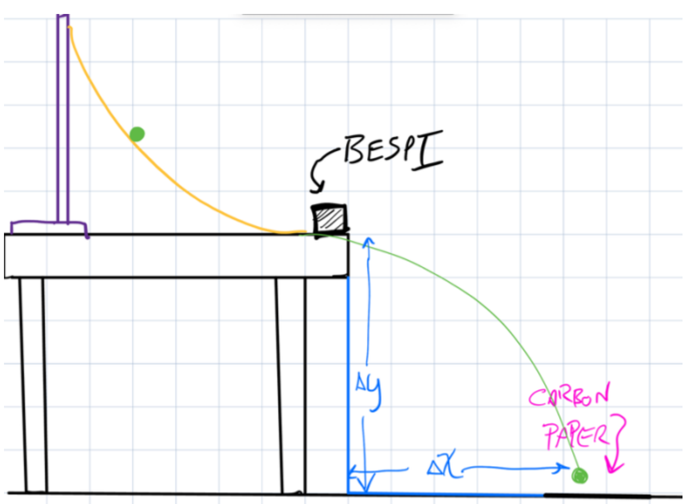
OBJECTIVE

In this lab we used the equations of motion for projectiles to calculate the velocity of a ball launched horizontally from a table. We also measured the velocity with a Beespi photo gate.

Then we compared the velocities to see how close they were.

PROCEDURE

We set up a track and Beespi as shown below 👇



We released the ball and let it roll down the track and off the table.

We used carbon paper to record where the ball landed.

The velocity of the ball when it leaves the table is recorded by the Beespi.

We also measured the height of the table (Δy) and the distance from the table the ball landed (ΔX).

DATA

This information is recorded below

Measured Velocity	Δy	Δx

CALCULATIONS

To calculate velocity, first find the time using the equation below 👇

$\Delta y = 4.9t^2$

Re-arrange the equation: $t = \sqrt{\left(\frac{y}{4.9}\right)}$

T = ______

To get v use $v = \Delta x / t$

V = _________

CONCLUSION