

Lab: To measure the acceleration of a cart as it moves down an incline

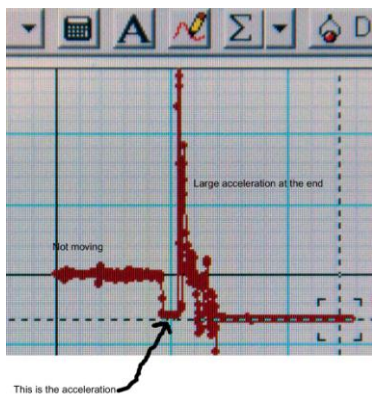
Procedure:

1. Boot up your computer. Assuming two students are working together, one should have Data Studio open and the other should have this lab instruction sheet open.
2. Set up the inclined plane as indicated in the picture. It should be at a shallow angle.



3. Place the cart with the accelerometer on the plane. Hold it steady.
4. Zero the accelerometer with the following 3 steps:
  - a) Push the "Start" button on the Data Studio Screen
  - b) Push the small black button on the accelerometer
  - c) Release the black button
  - d) Push the small black button again.
5. Release the cart so that it rolls down the incline.

6. Record the acceleration, length of the incline, and height of the incline (from the bottom of the incline to the table).



Acceleration (m/sec <sup>2</sup> )	Length (m)	Height (m)	A*L/H

7. Repeat at least 3 more times with the incline set at increasingly steep angles. Note: you MUST zero the accelerometer (step 4) at the beginning of each run.