

Momentum - Impulse

Name _____ Date _____

Source Notes:

This lab was modeled after the “Conservation of Momentum: Internal Force” lab #15
“Laboratory Physics”, Murphy Doyle, Merrill, 1990.
ISBN 0-675-02477-3

This lab was modeled after
Experiment P14: Collision – Impulse & Momentum
(Force Sensor, Motion Sensor)
Created by Pasco for their Science Workshop Software in 1996

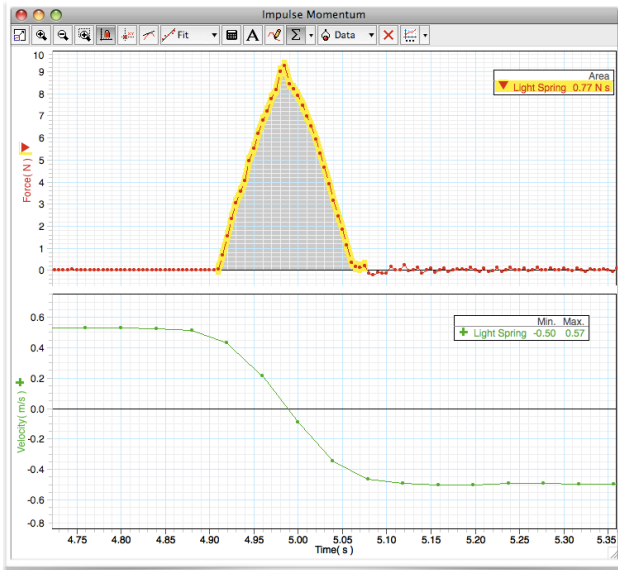
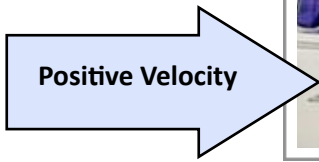
Jim Haine - Wissahickon High School, Ambler PA.
1997(?)
Modified 2010

Teacher Notes:

Modifications:

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Complete the following table using Data Studio.

The motion sensor provides the velocity throughout each collision. The change in velocity multiplied by the mass of the car provides the change in momentum for each trial.

Use the Force sensor and Bracket to measure the force. The area under the curve during the collision is the same as the Force multiplied by the time, and provides your value for impulse.

Trial	Description	mass	V_{init}	V_{final}	Δp	J	Error %
1							
2							
3							
4							
5							
6							