

Name _____

Period _____

Momentum Madness Lab Activity

All moving objects have what Newton called a "quality of motion."

What is the quality of motion? Today we call it *momentum*.

Momentum is a characteristic of a moving object that is related to the mass and the velocity of the object. **The momentum of a moving object can be determined by multiplying the object's mass and velocity.**

$$\text{Momentum} = \text{Mass} \times \text{Velocity}$$

Object mass trial 1 trial 2 trial 3 average distance cup moved

	Object	mass	trial 1	trial 2	trial 3	average	distance cup moved
1.	glass						
2.	plastic						
3.	metal						
4.	wood						

Average velocity of objects- 30cm/sec

Glass-cm/sec plastic-cm/sec metal-cm/sec wood-cm/sec

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Distance Cup Moved (cm)

1. 2. 3. 4. (object)

Momentum assessment:

1. What would happen if you tried to catch a ball when you were standing on roller skates?
2. What is the momentum of a parked car?
3. Why is it important for drivers to allow more distance between their cars when they travel at faster speeds?

Turn to page 676 in the "new textbook" interpreting diagrams. Read page 677 and summarize diagrams A, B, C.

Diagram A:

Diagram B:

Diagram C:

