

Name: _____

Date Started: _____ Date Completed: _____ Score: _____

Learning Activity Sheet

Linear Momentum and Its Conservation

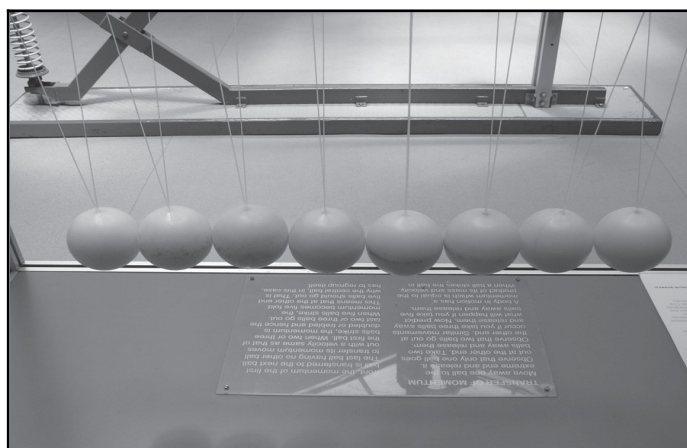
A. Choose the letter of the correct answer and write it in the blank provided before each number.

For numbers 1-4, refer to the following choices:

- A. collision
- B. impulse
- C. momentum
- D. kinetic energy

- _____ 1. What is conserved during an inelastic collision?
 - _____ 2. What is NOT conserved during an inelastic collision?
 - _____ 3. What is the product of the force of impact and the elapsed time?
 - _____ 4. What is the sudden, forceful coming together in direct contact of two bodies?
 - _____ 5. What is the momentum of a car with a mass of 2,000 kg traveling at 15 m/s?
- A. 2,000 kg m/s
 - B. 3,015 kg m/s
 - C. 30,000 kg m/s
 - D. 32,069 kg m/s

B. Newton's cradle, such as the one shown below, is a toy/device that not only entertains a child, but can also educate him/her about collisions. It demonstrates a series of collisions in which momentum is conserved. On the space provided, explain how this device illustrates the principle of conservation of momentum. Your output will be assessed using the scoring rubric.



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Be guided by the following criteria as you prepare your activity.

Criteria	Descriptors			
	Advanced 4 points.	Proficient 3 points.	Developing 2 points.	Beginning 1 point.
Accuracy of Concepts	Concepts are evident throughout, and all terms are used accurately.	Concepts are apparent, and all but one or two terms are used accurately.	Half of the expected concepts are apparent, and the student uses some terms accurately.	Concept is lacking most of the time, and very few terms are used accurately.
Organization of Ideas	The output is well prepared and has no mechanical errors; the overall organization of ideas is effective.	The output is prepared and has a few mechanical errors that did not interfere with the organization of ideas.	The output is not completely prepared and has mechanical errors that sometimes interfere with the organization of ideas.	The output is not prepared and has mechanical errors that mostly interfere with the organization of ideas.
Quantity of Concepts Involved	All possible concepts are included.	Few concepts are not evident.	Some of the concepts are not included.	Only one concept is included.
Creativity/ Uniqueness	The student suggests an original idea.	The student innovates ideas.	The student cites other ideas with references.	The student copies ideas and does not give any credits.