8th Grade Science
Redlands Middle School

Student_____
Date_____ Score _____ /4

Action-Reaction Skill Builder

1. Write Newton's Third Law of Motion in a way that is meaningful to you.

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   _____

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2. The car bouncing back up the track after colliding with the block during the Hot Wheels Lab: Part 2 is best explained by
   A. Newton's First Law of Motion
   B. Newton's Second Law of Motion
   C. Newton's Third Law of Motion

3. A basketball hits a backboard with a force of 0.75 N. How much force is exerted back on the basketball?
   a. 75 N
   b. 0.075 N
   c. 0.75 N
   d. 7.5 N

4. Match the law with the appropriate association:

___Newton's 1st Law of Motion	A. Action-Reaction
___Newton's 2nd Law of Motion	B. Force = Mass · Acceleration
___Newton's 3rd Law of Motion	C. Inertia

5. A bowling ball has a mass of 5 kg and a velocity of 2m/s - north. What is the momentum of the bowling ball?
   F. 3 kg·m/sec
   G. 7 kg·m/sec
   H. 20 kg·m/sec
   J. 10 kg·m/sec

6. Which Law explains why the path of a projectile (a baseball thrown from the outfield to home plate) is curved
   A. Newton's First Law of Motion
   B. Newton's Second Law of Motion
   C. Newton's Third Law of Motion

7. Motion
   F. Is a change of position
   G. Is the result of unbalanced forces
   H. Is explained by Newton's Laws
   J. All of these

8. A 100 pound 8th grader on Earth <u>weighs</u> about 17 pounds on the moon. What will his <u>mass</u> be on the moon?
   A. The same as it was on Earth
   B. Greater than it was on Earth
   C. Less than it was on Earth