FLINN SCIENTIFIC

Name_____

Slingshot Cars Worksheet

Data Table

Force (Rubber Bands)	Distance Slingshot Car Traveled (cm)			
	Trial 1	Trial 2	Trial 3	Average
1				
2				
3				

Post-Lab Questions and Calculations

1. Calculate the average distance the slingshot car traveled with the force of one, two, and three rubber bands, respectively. Record the averages in the Data Table.
2. For each action force described below, identify the reaction force from this activity.
   a. Action force; String pulls rubber band. Reaction force:
   b. Action force: Rubber band pulls pegs. Reaction force:
   c. Action force: Rubber band pushes stopper. Reaction force:
3. Identify at least two other action–reaction pairs of forces in this activity.
4. In terms of Newton's Laws of Motion, describe the sequence of events in this activity that caused the car to accelerate.
5. Why did the car stop moving?
6. The distance the rubber stopper traveled was not measured since it was prevented from being projected too far by the barrier. If no objects were in the way, would the distance stopper traveled be greater, less or the same as the car? Explain your answer.
7. Was your hypothesis from *Pre-Lab Question* 4 supported by the data? Explain.
8. The Voyager 1 spacecraft was launched from Earth on September 5, 1977. It is currently the most distant man-made object in space—more than 13 billion kilometers beyond the outermost planet of our Solar System and traveling at a speed of over 5 million km per year. How might Aristotle explain the behavior of the spacecraft? How would you explain it?