

Name _____

Read the investigation and write a conclusion for the investigation.

Tracey and Brendan wondered about the effect of the number of rubber bands on their wind-up toy airplane. They did the following investigation.

Question: How does the number of rubber bands affect the distance that a wind-up toy airplane flies?

Prediction (hypothesis): If we put more rubber bands on our wind-up toy airplane, then the more rubber bands there are hooked to the propeller, the further the plane will fly, because each rubber band provides more energy and the propeller will turn faster and longer, keeping the plane in the air longer.

Materials:

wind-up toy plane (PlayJet brand, model 2000)
10 rubber bands (12 gauge, 3 inch, Snapmequik brand)
tape measure

Procedure:

1. Take materials to a large flat area with no wind. (A gymnasium works well.)
2. With one rubber band on the plane, wind the propeller 20 turns, hold shoulder high and release.
3. Mark the spot where the plane lands and measure and record the distance.
4. Repeat 3 times.
5. Repeat steps 2, 3, & 4 with 3 rubber bands, 5 rubber bands, and 10 rubber bands on the plane.
6. Calculate and record the average for the trials.
7. Clean up materials and wash hands.

Data:

Number of rubber bands	Distance of flight in meters				Average
	Trial 1	Trial 2	Trial 3	Trial 4	
One rubber band	7	8	6	7	7 m.
3 rubber bands	10	12	11	9	10.5 m.
5 rubber bands	5	6	5	8	6 m.
10 rubber bands	2	0	1	1	0.75 m.

