Toy Truck

Directions: Use the following information to answer questions 4 through 10.

The toy truck with a key is a system. Damien and Bailey wondered if adding blocks to the toy truck system would affect the distance traveled. They did the following controlled experiment.

Question: What is the effect of blocks with different mass (10 grams, 20 grams, and 30 grams) on the distance a toy truck system with the block will travel?

Prediction: The toy truck system carrying the 10 gram block will travel the farthest distance.
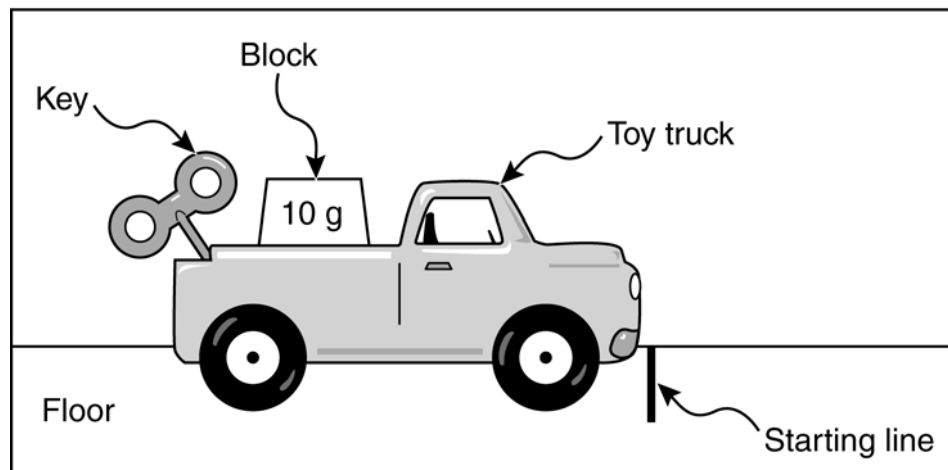
Materials:
toy truck system
3 blocks: 10 grams (g), 20 g, 30 g
tape
meterstick

Controlled Experiment Setup

Procedure:
1. Use the tape to mark a starting line on the floor.
2. Set the toy truck system at the starting line.
3. Put the 10-g block into the back of the toy truck system.
4. Turn the key on the toy truck 15 times and let go.
5. Measure and record the distance the toy truck system and block travel as Trial 1.
6. Repeat steps 2 through 5 two more times as Trials 2 and 3.
7. Repeat steps 2 through 6 for the 20-g block and the 30-g block.
8. Find and record the average distance the toy truck system traveled carrying each block mass.

Data:

Block Mass vs. Distance Traveled

Block Mass (grams)	Distance Traveled (centimeters)			
	Trial 1	Trial 2	Trial 3	Average
10	421	426	428	425
20	402	401	397	400
30	358	363	359	360

7 Write a conclusion for this controlled experiment.

In your conclusion, be sure to:
- Answer the experimental question.
- Include **supporting** data from the Block Mass vs. Distance Traveled table.
- Explain how these data **support** your conclusion.

Question: What is the effect of blocks with different mass (10 grams, 20 grams, and 30 grams) on the distance a toy truck system with the block will travel?
Conclusion: