

Monster Trucks

Procedure

- 1. Collaborate** Work with a partner. Cut away one short end of the shoebox. Use packing tape to tape the rulers to the long sides of the box and to attach the rubber band across the open end. Record your observations in the chart below.

		Distance	Time	Speed
Truck alone	Trial 1			
	Trial 2			
	Trial 3			
Truck with mass	Trial 1			
	Trial 2			
	Trial 3			

- 2. Experiment** Make a starting line on the floor. Place and hold the box so that the open end is at the line. Pull the truck against the rubber band, all the way to the back of the box. As your partner starts the stopwatch, let go of the truck. Record in your chart the time that the truck is in motion.
- 3. Measure** Use the measuring tape to measure the distance that the truck traveled. Record the distance.
- 4. Experiment** Repeat steps 2 and 3 two more times. Record the results of each trial.
- 5. Use Numbers** For each trial, find the truck's average speed by dividing the distance traveled by the time elapsed.

- 6. Use Variables** Tape a block of wood or other mass to the top of the truck. Do three more trials. Repeat again, using a greater mass.

Conclusion

Write the answers to the questions below.

- 1. Analyze Data** How far did the truck go in the first three trials? How did changing the mass affect the distance traveled or truck's speed?

- 2. Hypothesize** What do you think would happen if you added a second rubber band?

Investigate More!

Design an Experiment How could you use the same equipment to make the truck travel farther? Write your ideas, then test them. What factors affect the truck's motion?

