

NAME _____

START YOUR ENGINES

What limits how fast a racecar can go?

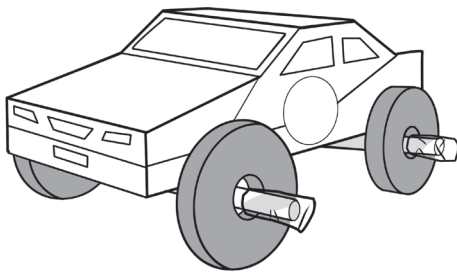
One factor is **drag**—a slowing force created when air pushes against an object. Try this activity to test how drag affects motion.

PROCEDURE:

- 1 Fold up both edges of a sheet of card stock. Lift one end of the card stock onto a stack of books to form a ramp.
- 2 Place your car at the top of your ramp so that it rolls forward. Measure the distance it travels. Repeat for a second test run. Record both results.
- 3 Tape an index card to the back of your car so that it sticks up above the car's roof. Repeat Step 2 again for two more test runs. Record the results of both runs.

GATHER YOUR MATERIALS:

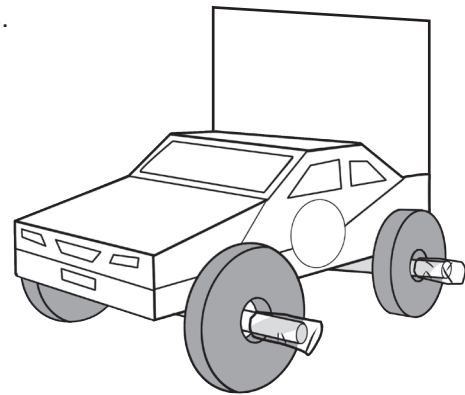
Completed car, ruler, tape, index card, card stock



DISTANCE TRAVELED
RACECAR WITHOUT INDEX CARD

Test Run 1

Test Run 2



DISTANCE TRAVELED
RACECAR WITH INDEX CARD

Test Run 1

Test Run 2

CONCLUSIONS:

Answer these questions on a separate sheet of paper.

- 1 Which car went farther? Explain why you think this happened.
- 2 How did adding the index card affect the car's drag?
- 3 Why might NASCAR engineers modify racecars to create the type of drag your racecar experienced? Look at the *Racecar Adaptations* sheet for clues.