Animal Speedsters

Objectives

Students will identify how fast they can run in miles per hour, then correlate their speed to that of a Cheetah!

Materials

- ❏ Stop Watches with second hands (per student group)
- ❏ Tape Measure
- ❏ Two medium sized cones
- ❏ Gym or track area large enough for students to safely run 50 ft
- ❏ Pen or pencil and paper to record studen't times

Background

While humans claim many unique abilities, we are one of the slowest animals on Earth! The Cheetah, on the other hand, is the fastest animal on land, reaching speeds up to 70mph as they pursue small antelopes and gazelles on the African plains.

Action

1. In a gymnasium or track, measure a straight distance of 50ft long. Place a cone at the starting point (0 ft.) and a cone at the stopping point (50 ft.).

2. Choose two students: one student to be the "timer" to stand at the finish line with a stopwatch and another to be a recorder.

3. Instruct the first student runner to get ready at the starting point. Have the "timer" begin the sprint by saying "Ready, Set, Go!" and stop the stopwatch once the student runner crosses the stopping point, the recorder denoting the student runner's name and time. Repeat for each student in class.

4. Return to the classroom and intoduce the equation Distance=Rate x Time. Explain that this is the equation that the students will use to calculate how fast they ran the 50ft in miles per hour (to compare to the cheetah's top speed).

   Example problem: Student A ran the 50ft in 25 seconds. D=50   T=25 seconds R=?
   D=R x T, so R=D/T therefore R=50 ft./25sec. R= 2 ft./sec.

5. Now convert feet per second into miles per hour. Multiply 2 ft./sec. (R) by 3600 sec./1 hr. = 7200 ft./hour. Then divide 7200 ft. by 5280 (feet/mile) to get 1.36 mph!

6. Have each student calculate their speed and then compare to the cheetah.