Speed Detectives

Read data to connect distance, time, and speed.

SC.4.P.12.2 "Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each distance and circle each time. Then write a 1 beside the sentence that explains why two objects can have different speeds when they travel the same distance.

Race Along the Path

1. During field day, four students ran along the same 60-meter path. Each runner started at the cone and stopped at the finish line. The distance was the same for everyone, but the time was not. Their times are shown in the table. Looking at equal distances makes it easier to compare how fast the runners moved.

FIELD DAY RUNNER DATA

Runner	Distance traveled	Time taken
Ari	60 meters	10 seconds
Bea	60 meters	12 seconds
Carlos	60 meters	15 seconds
Devon	60 meters	20 seconds

2. Speed tells how far an object travels in one unit of time. A unit of time can be one second, one minute, or another equal time amount. To find speed, divide distance by time. For example, an object that travels 24 meters in 6 seconds has a speed of 4 meters per second.

3. A bicycle and a walker might each travel 100 meters. If the bicycle takes 20 seconds and the walker takes 50 seconds, the bicycle's speed is 5 meters per second, and the walker's speed is 2 meters per second. The bicycle is faster because it travels the same distance in less time. Objects can move at different speeds.

2 ANSWER WITH EVIDENCE

Use the passage

1. What calculation can you use to find an object's speed?

2. What was Ari's speed? Show the unit in your answer.

3. Who moved faster, Carlos or Devon? Use their speeds to explain.

4. How much faster was Bea than Carlos?

3 YOUR TURN

Your own words

Invent two objects that travel the same distance but take different times. Write exactly two sentences that give the distance, both times, both speeds, and tell which object is faster and why.

ANSWER KEY

Speed Detectives

GRADE 4 · SC.4.P.12.2

PART 1 · READ AND MARK

Underline each distance and circle each time. Then write a 1 beside the sentence that explains why two objects can have different speeds when they travel the same distance. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What calculation can you use to find an object's speed?	**Divide the distance traveled by the time taken.**
2	What was Ari's speed? Show the unit in your answer.	**6 meters per second.**
3	Who moved faster, Carlos or Devon? Use their speeds to explain.	**Carlos moved faster. Carlos's speed was 4 meters per second, and Devon's speed was 3 meters per second.**
4	How much faster was Bea than Carlos?	**Bea was 1 meter per second faster. Bea's speed was 5 meters per second, and Carlos's was 4 meters per second.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Two toy cars each traveled 30 meters. Car A took 5 seconds and moved 6 meters per second, while Car B took 10 seconds and moved 3 meters per second, so Car A was faster because it traveled the same distance in less time.

Accept equivalent wording and correct units for speed. For the open response, accept any two objects with the same distance, different times, accurate speed calculations, and a correct comparison.