Name _____ Date _____

Motion

Before You Read

Before you read the chapter, respond to these statements.

1. Write an **A** if you agree with the statement.
2. Write a **D** if you disagree with the statement.

Before You Read	Motion
	• Distance and displacement are the same thing.
	• Velocity and speed are the same.
	• Whenever an object accelerates, its speed increases.

Construct the Foldable as directed at the beginning of this chapter.

Science Journal

Write a paragraph descibing three rides in an amusement park and how rides cause you to move.

Name _____ **Date** _____

Motion

Section 1 Describing Motion

Skim *Section 1 of the chapter. Read the headings and illustration captions. Write three questions that come to mind.*

1. _____
2. _____
3. _____

Review Vocabulary

Define *meter to reflect its scientific meaning.*

meter _____

New Vocabulary

Use your book to define the words below.

motion _____

distance _____

displacement _____

speed _____

Contrast the average speed *and the* instantaneous speed *of a runner in a race.*

average speed _____

instantaneous speed _____

Academic Vocabulary

Use a dictionary to define position *with its scientific meaning.*

position _____

Name _____ **Date** _____

Section 1 Describing Motion (continued)

Main Idea	Details

Motion and Position

I found this information on page _____.

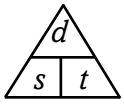
Draw ***a winding path that covers a distance of 70 miles and finishes with a displacement 20 miles southwest of the starting point. Label your diagram with the distance and direction traveled.***

Speed

I found this information on page _____.

Analyze ***the formula for speed by looking at the diagram and filling in the prompts.***

Put your finger over the *s* on the diagram. Now write the formula for speed. _____



Put your finger over the *d* on the diagram. Write the calculation to find distance when you know speed and time. _____

Prove to yourself that these formulas are correct by checking the units.

speed (units of or) = $\frac{\text{distance (units of or)}}{\text{time (units of or)}}$

distance (units of ___) = speed (units of ___) × time (units of ___)

Note that the units always turn out the same on both sides of the equation.

Name _____ **Date** _____

Section 1 Describing Motion (continued)

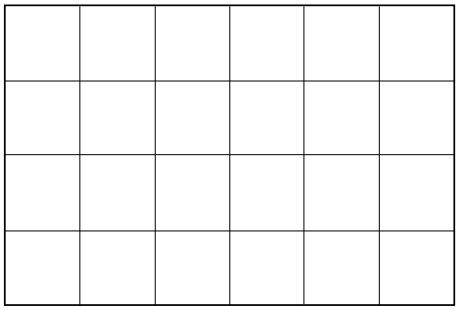
Main Idea

Graphing Motion

I found this information on page _____.

Details

Create ***a graph to show the progress of a runner who runs a 1-kilometer race in 3 minutes. The runner gets off to a fast start, runs the middle of the race at a more moderate pace, and then sprints to the finish.***



Graphing Checklist:
- title
- scale on *x*-axis
- units on *x*-axis
- label on *x*-axis
- scale on *y*-axis
- units on *y*-axis
- label on *y*-axis

Analyze It

Analyze the following statement. "A boat traveled at 10 km/h for one hour, then at 13 km/h for two hours, and finally at 11 km/h for another hour. The average speed over the whole trip was 15 km/h." Support your analysis with a calculation.

_____

_____

_____

_____

_____