Skills Worksheet

## **Directed Reading A**

## **Section: Measuring Motion**

1. Name something in motion that you cannot see moving.

## **OBSERVING MOTION BY USING A REFERENCE POINT**

2. An object in motion is moving in relation to an object that appears to a. stay in place.

- b. keep moving.
- c. maintain constant velocity.
- d. maintain constant acceleration.
- 3. When an object changes position over time relative to a reference point, the object is a. speeding. c. decelerating.
  - b. accelerating.
- d. moving.
- 4. For determining motion, the surface of Earth is a common
- 5. Why are buildings, trees, and mountains all useful reference points?
- 6. Can a moving object be used as a reference point? Explain.

## SPEED DEPENDS ON DISTANCE AND TIME

7. The speed of an object depends on the distance traveled and the

taken to travel that distance.

- 8. The SI unit for speed is \_\_\_\_\_
- 9. Why is it useful to calculate average speed?

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10. Explain how to calculate av	erage speed.	
11. When a person drives for se hour usually compare with t	everal hours, how the distance trave	v does the distance traveled in one eled in other hours? Explain.
12. Suppose that, on a graph she represents speed per hour, a both lines be exactly alike a	owing speed, the nd the other line nd in the same p	ere are two lines. One line represents average speed. Will place on the graph? Explain.
VELOCITY: DIRECTION MAT	IERS	
13. Why wouldn't birds end up the same speed at all times?	at the same dest	ination if they are flying exactly

14. What is the difference between velocity and speed?

Directed Reading A <i>continued</i> 15 How would you calculate the resultant velocity of two velocities in the sar direction?  16. How would you calculate the resultant velocity of two velocities in opposi directions? What direction is the larger velocity?  ACCELERATION  17. If your speed is not changing but your direction is changing, are you accelerating? Explain your answer.  18. Another name for acceleration in which velocity increases isacceleration.  19. What are the two common terms for decrease in velocity?  20. Write the mathematical formula for calculating average acceleration.  21. A speedometer shows that a cyclist is going 1 m/s the 1st second, 2 m/s th 2nd second, and 3 m/s the 3rd second, as the cyclist continues straight sou How do you know the cyclist is accelerating?	Name	Class	Date
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22. How wou	Ild acceleration be shown on a graph	?
23. A graph s as it goes roller coa	shows a roller coaster increasing in ve down the hill. Will the graph have an ster traveling down the hill? Explain	elocity for the first eight seconds n upward slope representing a your answer.
24. As long a your answ	is something travels in a circle, is it a ver.	lways accelerating? Explain
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