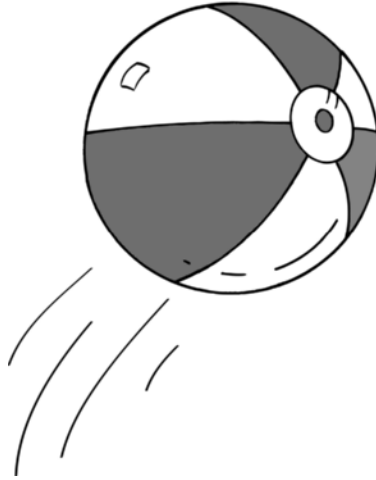


Chapter 8



Beach Ball



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When does gravitational force act on a beach ball? Check off all the descriptions that are examples of gravity acting on a beach ball.

- A. Beach ball tossed up into the air, moving upward
- B. Beach ball falling downward after it is tossed into the air
- C. Beach ball floating in a swimming pool
- D. Person holding a beach ball
- E. Beach ball resting on the ground, not moving

Explain your thinking. What rule or reasoning did you use to decide when gravity acts on a beach ball?

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Note-taking Chapter 8



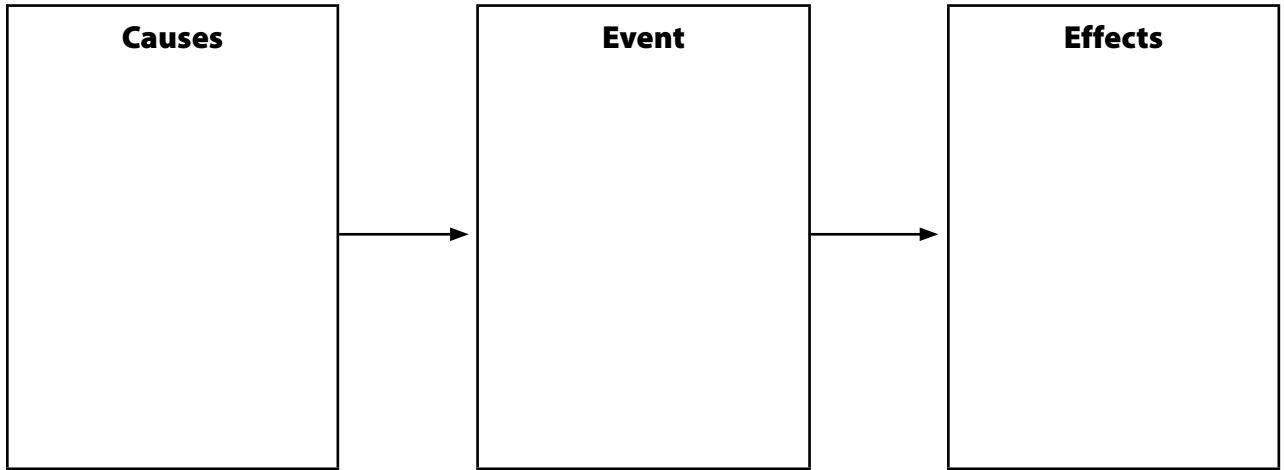
- 1 The Practice of Science
- 12 Motion of Objects
- 13 Forces and Changes in Motion



What is the relationship between motion and forces?

Before You Read

Before you read the chapter, think about what you know about motion and forces. Identify an event related to motion. Record the event in the center box. List one or more causes of the event in the first box. List one or more effects of the event in the third box.



Chapter Vocabulary

Lesson 1	Lesson 2	Lesson 3
<p>NEW reference point position displacement motion speed velocity acceleration</p> <p>ACADEMIC constant</p>	<p>NEW distance-time graph speed-time graph</p>	<p>NEW force contact force noncontact force gravity friction air resistance Newton's first law of motion Newton's second law of motion Newton's third law of motion</p>

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Lesson 1 Describing Motion

LA.6.2.2.3, MA.6.A.3.6, SC.6.P.12.1, SC.6.N.1.1, SC.6.N.1.4

Skim or scan the heading, boldfaced words, and pictures in the lesson. Identify or predict three facts you will learn from the lesson. Discuss your thoughts with a classmate.

Main Idea

Describing Position

I found this on page _____.



NGSS Check

How do you describe an object's position?

SC.6.P.12.1

Motion

I found this on page _____.

Speed

I found this on page _____.

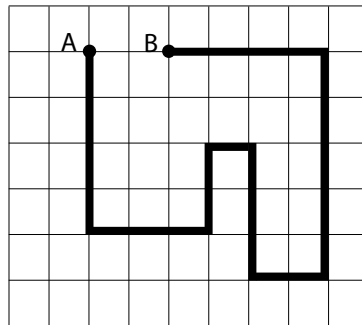
Details



Analyze the position in the description. Label the distance, direction and reference point.

The park is 3 km west of the school.

Differentiate between the distance and displacement for an object that started at point A and traveled as shown to point B.



Distance:

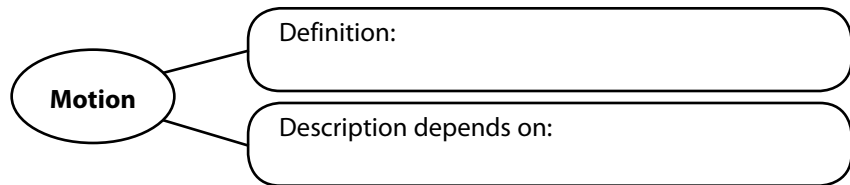
_____ units

Displacement:

_____ units



Characterize motion.



Distinguish concepts related to speed.

Term	What It Means
Speed	
Constant speed	
Changing speed	
Average speed	

Lesson 1 | Describing Motion (continued)

Main Idea

Velocity

I found this on page _____.

I found this on page _____.

Acceleration

I found this on page _____.

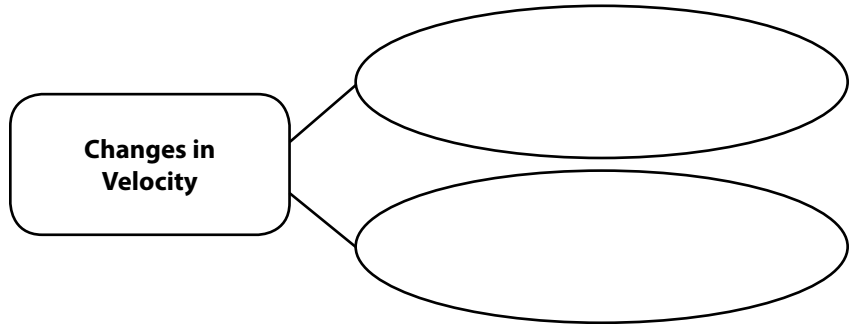
Details

 **Differentiate** speed *from* velocity.

Speed

Velocity

Identify two ways to change an object's velocity.




 **Contrast** velocity *with* acceleration.

Velocity

Acceleration

Describe three ways an object can accelerate.

Change in Velocity	Description
Positive acceleration	
Negative acceleration	
Changing direction	

 **Analyze It** Explain why, in a description of your motion for a whole day, your displacement is probably 0 m. Identify a reference point in your explanation.
