Biased Samples **In Exercises 5–12, explain why the sample may be biased. Then explain how to find an unbiased sample.** ***(See Examples 3 and 4.)***

5. A research company wants to determine how many people floss their teeth. The company asks a dentist to conduct a survey by randomly selecting patients.

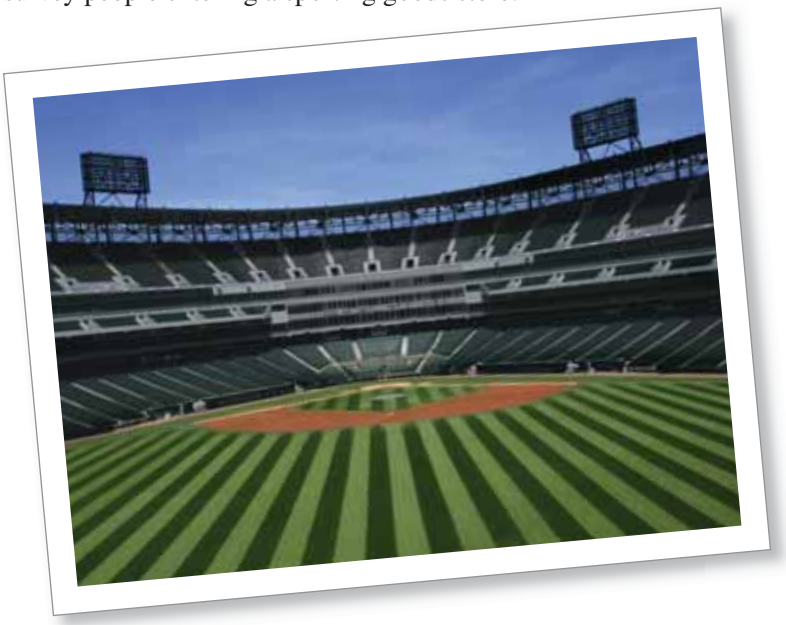
6. You want to estimate the number of students in a high school who ride the school bus. You randomly survey 60 seniors.

7. You want to estimate the number of defective items produced by a factory. You randomly inspect 200 items from one of the machines in the factory.

8. A college wants to determine whether to renovate the gym or the science lab. The college asks you to conduct a survey. You randomly survey 30 students leaving a science club meeting.

9. A radio station wants to determine how many people in the listening area support gun control laws. The station asks listeners to call in and answer the survey.

10. A city wants to determine whether the residents of the city favor using tax dollars to build a new baseball stadium. The city asks you to conduct a survey. You randomly survey people entering a sporting goods store.



11. A mayor wants to determine whether the residents of a city support a bill providing insurance for nursing home care. The mayor asks you to conduct a survey. You randomly survey residents of five nursing homes in the city.

12. A research company wants to determine how many people in the United States spend at least 1 week at the beach each year. The company surveys residents of California, Florida, and North Carolina.