1. The school board wants to study computer literacy among teachers in their school district. Give an example below that represents a **random** sample of teachers?
2. In a random sample, 3 of 400 computer chips are found to be defective. Based on the sample, about how many chips out of 100,000 would you **expect** to be defective?
3. Marvelous Middle School has 580 students. Bob surveys a random sample of 30 students and finds that 12 of them have pet dogs. Use this example to **predict** how many students at the school are likely to have pet dogs.
4. To evaluate customer satisfaction, a grocery store gives double coupons to anyone who completes a survey as they enter the store. The store manager determines that customers are very satisfied with their shopping experience in his store. Biased or Unbiased? Why?
5. To evaluate the integrity of underground water lines, the department of public works randomly selects 20 sites in the city to unearth and observe the water lines. At 5 of the sites, the water lines needed repair. The department of public works concludes that about one-fourth of underground water lines throughout the city need repair. Biased or Unbiased? Why?
6. In 2000, about 29% of the foreign visitors to the U.S. were from Canada. If a particular hotel had 150,000 foreign guests in one year, how many would you predict were from Canada?
7. A survey found that 85% of people use emojis on their instant message. If Western Middle School has a population of about 900 students, about how many use emojis on their instant message.
8. A survey at a college found that 3 of every10 students at that college wanted to earn a degree in medicine. If there are 350 students at the school, about how many want to earn a degree in medicine.
9. Bill found that 20 of the 50 students he randomly surveyed in the lunch line liked enchiladas the best. There are 520 students at Bill’s school. Predict how many like enchiladas the best.
10. To determine what kind of sport junior high school students like to watch, 100 students are randomly selected from each of four junior high schools in a city. Of these, 47% like to watch football. The superintendent concludes that about half of all junior high students like to watch football. Is the conclusion valid? Why or Why not?
11. To determine the favorite soft drink in a town, I called every 50th number in the phone book. Biased or Unbiased? Why?
12. To determine whether money should be spent on the music program or athletics, the principal surveyed parents at a band concert. Biased or Unbiased? Why?
13. To evaluate customer satisfaction, a grocery store gives triple coupons to anyone who enters the store and fills out a survey. Biased or Unbiased? Why?
14. Which one of the following sampling methods would give unbiased results, if you need to find out the number of people in your town liking vanilla or chocolate ice creams?

A.  ask my neighbors

B.  randomly select a few ice cream shops in town, and question people coming there

C.  ask my friends

D.  ask my classmates

1. The manager of a furniture store asks the first 25 customers who enter the store if they prefer dining room tables made of oak, cherry, or mahogany wood. Of these, 17 said they prefer cherry. If the store manager orders 80 dining room tables in the next shipment, how many should be made of cherry wood?