

## Family Letter

Dear Student and Family Members,

Did you know that the “average American” eats 24 quarts of ice cream and 68 quarts of popcorn every year? Did you ever wonder how people come up with numbers like these? Our next chapter is about analyzing data—numbers, facts, or other measurable information.

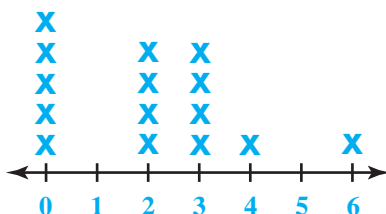
You’ll explore three ways of measuring what is typical—the median, mode, and mean. Here’s an example. Suppose you ask 15 of your friends to tell you how many movies they’ve seen in the past month. You organize the data into a list.

**0, 0, 0, 0, 0, 2, 2, 2, 2, 3, 3, 3, 3, 4, 6**

- The median is the middle number in the list, 2.
- The mode is the number that appears the most often, 0.
- The mean is the number you get if the total, 30 movies, is divided evenly among all your friends. The mean is  $30 \div 15$  or 2.

So, you might conclude that your friends saw an average of 2 movies in the last month.

Along with analyzing data, it’s important to display the data. You’re already familiar with bar graphs and line graphs, but in this chapter you’ll learn about histograms, stem-and-leaf plots, double bar graphs, and line plots too. Here’s a line plot of the data above.



Graphs can make it easier to see patterns in data and to draw conclusions. What is obvious in the line plot that wasn’t when the data was shown in the list?

**Vocabulary** Throughout the chapter you’ll see these new vocabulary terms:

**distribution**

**histogram**

**line plot**

**mean**

**median**

**mode**

**outlier**

**range**

**stem-and-leaf plot**

### What can you do at home?

During the next few weeks, your student may show an interest in data outside of the classroom. You might help him or her to think of different kinds of data people collect and why—purchases in the grocery store, telephone opinion surveys, political exit polls, or hits at a Web site.

