Name_____ Date _____

11.5 Choosing a Data Display
For use with Exploration 11.5

Essential Question   How can you display data in a way that helps you make decisions?

1 EXPLORATION: Displaying Data

Work with a partner. Analyze the data and then create a display that best represents the data. Explain your choice of data display.

a. A group of schools in New England participated in a 2-month study and reported 3962 animals found dead along roads.

birds: 307

mammals: 2746

amphibians: 145

reptiles: 75

unknown: 689

b. The data below show the numbers of black bears killed on a state's roads from 1993 to 2012.

1993: 30   2003: 74
1994: 37   2004: 88
1995: 46   2005: 82
1996: 33   2006: 109
1997: 43   2007: 99
1998: 35   2008: 129
1999: 43   2009: 111
2000: 47   2010: 127
2001: 49   2011: 141
2002: 61   2012: 135

c. A 1-week study along a 4-mile section of road found the following weights (in pounds) of raccoons that had been killed by vehicles.

13.4	14.8	17.0	12.9	21.3	21.5	16.8	14.8
15.2	18.7	18.6	17.2	18.5	9.4	19.4	15.7
14.5	9.5	25.4	21.5	17.3	19.1	11.0	12.4
20.4	13.6	17.5	18.5	21.5	14.0	13.9	19.0

11.5 **Choosing a Data Display** (continued)

1 **EXPLORATION:** Displaying Data (continued)

d. A yearlong study by volunteers in California reported the following numbers of animals killed by motor vehicles.

raccoons: 1693   gray squirrels: 715

skunks: 1372   cottontail rabbits: 629

ground squirrels: 845   barn owls: 486

opossum: 763   jackrabbits: 466

deer: 761   gopher snakes: 363

Communicate Your Answer

2. How can you display data in a way that helps you make decisions?

3. Use the Internet or some other reference to find examples of the following types of data displays.

bar graph   circle graph   scatter plot

stem-and-leaf plot   pictograph   line graph

box-and-whisker plot   histogram   dot plot

11.5 Notetaking with Vocabulary
For use after Lesson 11.5

In your own words, write the meaning of each vocabulary term.

qualitative (categorical) data

quantitative data

misleading graph

Core Concepts

Types of Data

Qualitative data, or **categorical data,** consist of labels or nonnumerical entries that can be separated into different categories. When using qualitative data, operations such as adding or finding a mean do not make sense.

Quantitative data consist of numbers that represent counts or measurements.

Notes:

Name _____ Date _____

Extra Practice

In Exercises 1–4, tell whether the data are *qualitative* or *quantitative*. Explain your reasoning.

1. bookmarks in your web browser

2. heights of players on a basketball team

3. the number of kilobytes in a downloaded file

4. FM radio station numbers

In Exercises 5 and 6, analyze the data and then create a display that best represents the data. Explain your reasoning.

5.

Home Runs Each Year											
Babe Ruth						**Hank Aaron**					
0	4	3	2	11	29	13	27	26	44	30	39
54	59	35	41	46	25	40	34	45	44	24	32
47	60	54	46	49	46	44	39	29	44	38	47
41	34	22	6			34	40	20	12	10	

Name_____ Date _____

6.

Total Points Scored by a Basketball Team for Each Game
48 56 49 52 40 65
30 47 62 40 59 37
45 41 44 33 44 30

In Exercises 7 and 8, describe how the graph is misleading. Then explain how someone might misinterpret the graph.

7.

Walking

Frequency

24
20
16
12
8
4
0

0–59   60–89   90–119

Minutes

8.

Test Score

Score

90
85
80
75
70
65
60

Ann   Bob   Carol   Don

Student