Case Closed - Evidence:

Twenty players participated in the golf tournament. The average (mean) score was 74.85, or about 75. This is 3 points above par. As the histogram shows, seven players scored at par or below, seven slightly above par (73-78), and the remaining six were well above par. The median score was 75.5, which means that half of the players scored below 75.5 and half scored above 75.5. The highest score was 83 and the lowest was 67 for a range of 16 points. This wide of a range suggests that there was much variation among the players' performances in this tournament.

Classroom Cases:

Here are some activities you and your student can do together.

Read charts, tables, and graphs in newspapers and magazines. Discuss the information that each display shows.

Collect data about your student's favorite sport and make a graph showing how a team is doing over time or a graph showing how various teams performed last season.

Take an inventory of something in your house (perhaps the types of groceries in your pantry). Organize the information in a frequency table.

Conduct a survey on your street. (What colors of cars do people drive?) Organize your data, display it, and discuss how this information might be used.

Further investigations:

Here are some activities you and your student can do together.

Gathering Data

Students will:

- Form questions that can be answered by data
- Verify frequency distributions, tables, and graphs using data
- Choose appropriate tables and graphs to be consistent with the nature of the data
- Use tables and graphs to determine variation between groups
- Relate the data analysis to the content of the question posed

Case Closed - Evidence:

<table>
<thead>
<tr>
<th>Golf Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

Key: 6|7 = 67

Case Closed - Evidence:

1. Given the data below, organize it in a stem-and-leaf plot, frequency table, or line plot.

Scores in a local golf tournament: 81, 82, 76, 79, 68, 70, 80, 67, 76, 75, 82, 67, 67, 77, 73, 72, 72, 74, 76, 83

<table>
<thead>
<tr>
<th>Golf Tournament Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-69</td>
</tr>
</tbody>
</table>

Number of Players

Scores

2. Display the data in an appropriate graph and discuss the outcome of the tournament.

3. Suppose we want to describe the typical middle school teacher. We are going to conduct a survey among a sample of teachers across the state. Please list five questions we might pose to gather responses that will help with our description.

Case Closed - Evidence:

1. What subject(s) do you teach?
2. How many years have you been teaching?
3. How much time do you spend planning lessons?
4. What responsibilities do you have other than teaching, such as club sponsor, coach, etc.?
5. Do you have any hobbies? If so, please list two.

Terminology:

Data: The facts or numbers that describe something.

Categorical - Describes a quality, such as a person’s gender, race, or religion.

Numerical – Gives the count (number of cars) or a measurement (height, scores).

Frequency Table: A chart for organizing data. It shows the number of times each item appears.

Median: The midpoint of a set of data. If all the pieces of data are arranged in order, the median is the value that divides the data in half.

Mode: The value in the data set that occurs most often. Mode often represents categorical data.

Mean: The sum of the data values divided by the number of data items. Mean is often called the average.

Range: The spread of the data found by subtracting the smallest data value from the largest data value.

Book’em:

Tiger Math by Ann Nagda

Chimp Math by Ann Nagda and Cindy Bickel

Incredible Comparisons by Russell Ash

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