

Displaying Data: Bar Graphs & Histograms

Name: _____ Date: _____

LEARNING OBJECTIVE

The student will organize a data set into a frequency table and create both a bar graph and a histogram to display it visually.

MATERIALS NEEDED

- Paper (graph paper if available)
- ruler
- colored pencils or markers
- pencil
- the data set collected in Week 7 (or new data)

HANDS-ON ACTIVITY

1. Using your Week 7 data (or a new data set of at least 15 values, such as favorite colors of 15 people or test scores), organize it into a frequency table listing each category or range and its count.
2. For categorical data (like favorite colors), draw a bar graph with labeled x-axis (categories) and y-axis (frequency), using a ruler for straight, evenly spaced bars.
3. For numeric data, group the values into equal-width ranges (e.g., 0-10, 11-20, 21-30) and draw a histogram, where bars touch each other (no gaps) to show continuous data.
4. Color-code your bars and add a clear title and axis labels to both graphs.
5. Write one sentence describing the overall pattern or trend your graph shows.

QUESTIONS

1. What data did you graph, and what was the most frequent category or range?
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2. What is the key visual difference between a bar graph and a histogram, and why does that difference matter?
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3. Describe the overall shape or trend your histogram or bar graph shows.
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4. **If you were presenting this graph to convince someone of a conclusion, what conclusion would your data support?**
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