



Graphs, Charts, and Tables Lesson Plan

Objectives

At the end of the graphs, charts, and tables lesson, students will be able to:

- Interpret and compare data from graphs (including circle, bar, and line graphs), charts, and tables.

BACKGROUND INFORMATION

Tables and charts display data and statistics in an easily understood format by organizing information in columns and rows. To use tables and charts, students must be able to use the title, column, and row headings. Another way to provide information in an accessible format is with graphs.

The most common types of graphs are:

- Circle graphs - typically used to display parts of a whole, where the whole equals 100%.
- Bar graphs - used to compare or contrast values.
- Line graphs - used to show trends or changes over time.

[Vocabulary](#) for this topic is found in the *GED Connection* Mathematics workbook, p. 194 and 214.

This lesson should take approximately 2 hours to complete, if all components are utilized.

Video

Set up the video by reminding students that data is information and information is power. How do we make the data interesting and meaningful?

Show the video [Tables](#).

After watching the video, focus on these points:

- Tables and graphs present information from data in a way that is easy to read and easy to understand.
- Data are bits of information that can be organized in tables.
- Tables help the reader locate specific data easily.
- Read the row and column headings. Find the data where they intersect.

Before watching the next video, remind students that they must understand what is being asked, then work strategically. Some problems do not ask for specific information; they want the “big picture” instead. To find what the data means, or what the data is telling us, we may find graphs and charts more useful.

Show the video [Graphs and Charts](#).

After watching the video, focus on these points:

- Graphs and charts present information in a way that gives you a picture of the information. They help you make conclusions based upon this data.
- Bar, or column, graphs compare and contrast data.
- One axis often shows subcategories of the subject of the graph.
- The other axis often shows the numerical values used to measure the subject.

Introduce the next video by saying, “This video segment tells us about circle graphs, often called pie charts, and pictographs.”

Show the video [Circle Graphs](#).

After watching the video, focus on these points:

- Pictographs use pictures or symbols to represent quantities. A key shows the value of each symbol.
- Circle graphs show the relationship of parts to a whole. The whole “pie” represents 100%. If you know how much the whole represents, you can use your knowledge of percents, fractions, ratios, or decimals to find the amounts represented by the part.
- The parts of the pie represent how the 100% is divided among the categories.

Before the next video, remind the students that another popular way to show information is in a line graph. Point out that each type of graph is designed to show different kinds of information, and ask them to listen to determine what type of information is best shown by a line graph.

Show the video [Line Graph](#).

After watching the video, focus on these points:

- Line graphs often show changes over time.
- The horizontal axis or “x axis” often shows time.
- The vertical or “y axis” often show the values of what you are measuring.

Finally, introduce the last video by emphasizing the need for careful reading of the labels and scales to avoid common errors. This video shows an example of a graph with negative values, and cautions readers to be aware of how data can be shown in ways intended to persuade instead of inform.

Show the video [Graphing Negative Values](#).

After watching the video, focus on these points:

- Graphs of positive numbers appear in the upper right quadrant of the coordinate grid, but if the data has negative values, the graph may use other quadrants.
- Graphs and tables can be misleading when numbers are left out or benchmarks are not used.

Worksheets/Practice

This [worksheet packet](#) includes some practice problems for each video segment, from the *GED Connection* Mathematics workbook.

Skill Practice, p.197, problems 1 – 3

Skill Practice and Problem Solver Connection, p. 199

Skill Practice, p. 201, using the graphs on p. 200 and 201

Skill Practice, p.199,

Skill Practice, p. 205, using the graphs on p. 204 and 205

Skill Practice, p. 203

Online Activities

Further practice can be found online at PBS LiteracyLink website at www.pbs.org/literacy.

For more resources and an overview of the 2002 GED® test, click www.gedmathstrategies.com.

Test Tips:

- Graphs, charts, and tables are not only found on the Math test, but also on the Social Studies and Science tests.
- Read titles carefully. They tell us the subject of the chart, graph, or table.
- Read axis labels carefully to determine what is explained about the subject.
- Read any keys, captions, or notes to help you interpret symbols, colors, or other devices used to describe the information about the subject.
- Learn to read the scales of the axes to avoid errors.

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