

GED 2002 Teachers' Handbook of Lesson Plans

Area/Skill - Math	Cognitive Skill Level - Synthesizing	Correlation to Framework - 05.01/05.16	Lesson Number - 07
<p>Activity Title – Analyzing Graphs and Tables</p> <p>Goal/Objective</p> <p>This lesson provides students with a hands-on experience in the area of collecting, analyzing and interpreting data.</p> <p>Lesson Outline</p> <p>Introduction</p> <p>This lesson utilizes readily available material to illustrate the basic concept of data collection and representation. The number of various colored candies in a candy assortment will be used to illustrate this concept.</p> <p>Activity</p> <p>All students will need a package of assorted colored candies such as jelly-beans, Reece's Pieces®, M & M's® etc. Begin the lesson by reviewing the basic types of graphs such as pictograph, bar graph and circle or pie graph. After the class is comfortable with the types of graphs, distribute the candy samples to each student. Instruct students to open their packages and separate the candies into various colors.</p> <p>After the candies have been separated, instruct the students to record their data and to construct a graph that represents their candy.</p> <p>Debriefing/Evaluation Activity</p> <p>Discuss the value of this exercise. Compare the graphs and rate the effectiveness of presenting information using graphs rather than text. Discuss if information obtained from graphing would be useful in real life situations such as predicting and planning.</p>			<p>Materials/Texts/Realia/Handouts</p> <ul style="list-style-type: none"> • Paper, pencils • Candy (assorted colors) • Markers or colored pencils • Graph paper
			<p>Extension Activity</p> <p>Using information collected about the candy, assign each student to create another graph using a different type of graph.</p>
			<p>ESE/ESOL Accommodations</p> <ul style="list-style-type: none"> • Let the student use a calculator for routine computation tasks. • Provide the student with a list of the steps to follow when solving problems. • Allow students to work together on a task.
<p>Real-Life Connection</p> <p>Assign students the task of graphing the traffic that passes by a given point. Illustrate data such as the type of vehicle, number of passengers, color of vehicle etc.</p> <p>Graph the information to explore any trends such as the need for traffic control devices or road congestion.</p>			

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<p data-bbox="58 224 680 256">Activity Title - Analyzing Graphs and Tables</p> <p data-bbox="58 289 235 321">Introduction</p> <p data-bbox="58 354 2024 418"><i>Say:</i> The use of graphs and table is very important in our daily lives. Think of how many times we take a quick look at a chart, rather than reading all of the directions. If people are going to be proficient at reading charts and graphs, they must also be able to create them.</p> <p data-bbox="58 451 243 483">Main Activity</p> <p data-bbox="58 516 2032 581"><i>Say:</i> Today we will be creating a graph to illustrate the number of different colored candies in a package. Before we begin our activity, we need to review three types of graphs.</p> <p data-bbox="58 613 2024 678"><i>Do:</i> Sketch a bar graph, pictograph and pie or circle graph for the class. Illustrate the sketch with some sample information. Answer any questions that arise.</p> <p data-bbox="58 711 2024 776"><i>Say:</i> I will now distribute the candy packages. After you receive your candy, separate the candy by color and record the number of each color. After you recorded your data, create one graph to represent your results.</p> <p data-bbox="58 808 1134 841"><i>Do:</i> Allow students to create a graph of their choice. Circulate and assist if needed.</p> <p data-bbox="58 873 1722 906"><i>Say:</i> At this time, I would like each student to share his/her graph with the class and explain why he/she chose a specific format.</p> <p data-bbox="58 938 1995 1003"><i>Ask:</i> Did anyone notice any trends? If so, what were they? Was each sample the same? What are the differences, if any? Would a graph be useful for making decisions or clarifying a point of view?</p> <p data-bbox="58 1036 340 1068">Closure/Conclusion</p> <p data-bbox="58 1101 1965 1166"><i>Ask:</i> Is it easier to understand information when presented as a graph? You can see that a graph makes concepts clearer. Would a graph be helpful when making a decision or working for a cause?</p> <p data-bbox="58 1198 470 1230">Follow-Up Lessons/Activities</p> <p data-bbox="58 1263 1696 1295">Instruct the student to create another graph using the same information but a different format. Compare the results for clarity.</p> <p data-bbox="58 1328 2024 1393"><i>Say:</i> You may wish to create a graph that represents traffic patterns in a given street. Graphing the number of trucks may be useful in making a presentation to a governmental agency if a group is seeking restrictions on residential streets or speed limits. You may also want to graph your exercise results or weight gain/loss if you are working on a healthy life-style.</p>			