

**GED 2002 Teachers' Handbook of Lesson Plans**

<b>Content Area</b> Social Studies	<b>Lesson Title</b> <i>Graph It with Coffee!</i>	<b>Correlation to Framework</b> 02.06, 02.08	<b>Lesson Number</b> 42
<p><b>Objectives/Learner Outcomes</b></p> <p>At the end of this lesson, the learner will be able to:</p> <ul style="list-style-type: none"> <li>• Work on projects involving interviews and, teamwork</li> <li>• Collect information</li> <li>• Develop and use comparison and contrast graphs</li> <li>• Justify the information recorded on a graph</li> <li>• Examine information from graph</li> </ul>		<p><b>Materials/Resources/Internet Sites/Handouts/Worksheets</b></p> <ul style="list-style-type: none"> <li>• Markers (3 different colors)</li> <li>• Disposable camera</li> <li>• Transparencies of examples of different graphs found in newspapers</li> <li>• Overhead projector</li> <li>• Handout – <i>Coffee Graph</i></li> </ul>	
<p><b>Pre-Requisite Knowledge</b></p> <p>The learner should be able to:</p> <ul style="list-style-type: none"> <li>• Take fast notes (interview)</li> <li>• Organize data</li> <li>• Work in a group setting</li> </ul>		<p><b>Key Words</b></p> <ul style="list-style-type: none"> <li>• Graph</li> <li>• Data</li> <li>• Fact</li> <li>• Speculation</li> <li>• Profit</li> </ul>	
<p><b>Anticipatory Set/Introduction</b></p> <p>To introduce the lesson,</p> <p><b>Say:</b> Every day Americans and people all over the world drink coffee. Imagine how many cups of coffee are served daily! How many sacks of coffee do you think a business owner buys monthly? Yearly? How much money does coffee generate for a business? How many cups of coffee does a vendor makes a day?</p> <p>Engage students by letting them participate in a discussion on coffee and how much may actually be consumed in a day. Many students will say that they have no idea. Push them to give an estimate. It is a perfect opportunity to explain the difference between fact and speculation. Explain that a fact is accurate information based on reliable data, while speculation is a personal idea or opinion.</p> <p>Divide the class into groups of 3 to 4 students. Provide students with the Handout – <b><i>Coffee Graph</i></b>. Explain to students that in order to complete this activity, they will have to interview people from at least three different coffee places. Have them interview employees as well as employers (managers, owners, vendors).</p>			

### Preview Questions for Lesson

1. What is a graph?
2. Why are graphs used?
3. What information can be put on graphs?

### Instructional Outline

Show transparencies of different types of graphs so that students have ideas regarding how information is organized into graphs. You may also wish to show transparencies of graphs that are found in newspapers and, magazines. Discuss the different types of graphs (bar, line, and pie) and how they each depict different types of information. An example is that line graphs best depict trends, whereas pie or circle graphs are used to depict parts of a whole.

**Say:** There are many different types of graphs and charts used on the GED Tests in the areas of Social Studies, Science, and Mathematics. On these tests, 50% or more of the questions use some type of graph, chart, or picture. That is why it is so important for you to know how to create graphs and charts, as well as analyze the data on them.

Begin the activity by doing a quick survey of the class.

**Ask:** Who drinks coffee?

Count the number of students who drink coffee versus the non-coffee drinkers. Have the students assist you in creating a graph to represent the data. Discuss how they took data that was obtained orally and visually represented it by a graph. You may wish to show students how either a bar or pie/circle graph can be used for this data. Discuss how graphs are helpful when doing compare and contrast studies, as well as being useful to obtain a “quick picture” of information.

**Process/Activities**

**Say:** To complete this activity you must visit three coffee places to interview employees and employers. When you are visiting the different places, ask the following questions:

1. How many cups of coffee are served daily by your business?
2. How many sacks of coffee are consumed daily by your business?
3. How many cups of coffee do you make each day?
4. How much money does coffee generate to your business? Per cup? Per week, month, or year?

Have students bring back the different information obtained from their interviews. Because they have three sets of data for each question, they can create graphs to compare and contrast the information obtained. Have them share the graphs with the class.

**Say:** When creating graphs, it is important for you to understand that it is a process. Sometimes, the information is difficult to place in a specific format. Sometimes, you may even have problems in simply obtaining the information.

**Teaching to Different Types of Learners**

	<b>Visual</b>	<b>Auditory</b>	<b>Kinesthetic/Tactile</b>
<b>Learning Activity</b>	Show examples of graphs to students. Visual learners may wish to use photographs as a source of documentation or transparencies of their graphs in order to share them with their classmates.	Verbally provide instructions to auditory learners. Students may wish to use tape recorders when obtaining information from their interviews for their graphs.	Students may wish to use tape recorders when obtaining information from their interviews. Provide students with templates of graphs from which to develop additional graphs.
<b>Special Differentiation Strategies</b>	Use an overhead transparency to introduce different examples graphs.	Discuss information given to students to make sure that there is a full understanding of what has just been explained.	Help students to use color-coding when creating different types of graphs. They may wish to use things such as paper plates to create circle graphs or construction paper to create bar graphs.
<b>Evaluation Students</b>	Allow students to present their graphs by using transparencies.	Allow students to verbally explain the different parts of their graphs.	Allow students to use manipulatives to create their graphs.

**The Family and Adult Literacy Connection**

Have students identify simple graphs and charts in children's magazines or books to share. Students may wish to help their children create different types of graphs with such common manipulatives as paper plates or construction paper. Children can determine how many hours they spend in activities during the day. Parents can then assist their children in creating a chart to show this information. Pictographs are also a good beginning method to teach children about graphs. Parents can use pictures on a chart to document such things as whether or not a child brushed his/her teeth, did his/her homework, etc.

**ESE/ESOL Accommodations**

Have students identify the different types of graphs and locate examples in newspapers and magazines. Provide them with templates for each of the different types of graphs, including how to label each part of the graph. When creating graphs, allow students to work in groups or to use different types of manipulatives. You may also provide students with the data to place in their graphs.

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### Coffee Graph

1. Create a graph for each of the following questions to document the data that you obtained from the interviews that you completed. You should have a minimum of three data items for each of the graphs. Decide what type of graph you will use and whether or not items can be combined.
  1. How many cups of coffee are served daily by your business?
  2. How many sacks of coffee are consumed daily by your business?
  3. How many cups of coffee do you make each day?
  4. How much money does coffee generate to your business? Per cup? Per week, month, or year?

Example:

**How Many Cups Are Served Daily?**

