

Area/Skill - Mathematics	Cognitive Skill Level - Application	Correlation to Framework - 05.01/05.03/05.16	Lesson Number - 33
<p><b>Activity Title - Flag Pole</b></p> <p><b>Goal/Objective</b></p> <p>To increase a student's skill in applying mathematical concepts to real-life situations.</p> <p><b>Lesson Outline</b></p> <p><b>Introduction</b></p> <p>Real-life situations provide invaluable opportunities to use mathematics. One example is to have students determine the length of rope on a flagpole and the cost to replace the rope.</p> <p><b>Activity</b></p> <p>Model situations where students have to solve for the missing information. When they are done, tell them that you have a real-life problem, the flagpole needs a new rope. Without dismantling the rope or lowering the flag, have students calculate the rope's length and the cost to replace the rope. Provide students with the following information: the flagpole is 10 feet high, the rope must be 2.5 times the length of the flagpole, the rope costs 99 cents per yard and there is a 7% sales tax. Have students first create the equation to solve the problem and then solve the problem.</p> <p><b>Debriefing/Evaluation Activity</b></p> <p>Have students create their own math problems that require multiple steps to solve. Have them share their problems with the class.</p>		<p><b>Materials/Texts/Realia/Handouts</b></p> <ul style="list-style-type: none"> <li>• Paper and pencils</li> <li>• Calculators</li> <li>• Chart paper/board and markers</li> <li>• Sample word problems requiring students to identify the missing element</li> </ul>	
<p><b>Real-Life Connection</b></p> <p>Have students brainstorm how they use math in their daily lives. Write their answers on the board.</p>		<p><b>Extension Activity</b></p> <p>Have students do comparison shopping for the rope. See whether a better cost can be found at a hardware store, department store, convenience store, etc.</p> <p><b>ESE/ESOL Accommodations</b></p> <p>Allow students to use calculators.</p> <p>Use drawings to illustrate the process that students must follow.</p> <p>Teach students to simplify math problems by completing only one step at a time.</p> <p>Orally discuss the steps required to solve a problem before students complete the task.</p>	

## GED 2002 Teachers' Handbook of Lesson Plans

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<b>Activity Title - Flag Pole</b>			
<b>Introduction</b>			
<i>Say:</i> We have been given the task of shopping for rope to replace the frayed rope on the flagpole outside of the school.			
<b>Main Activity</b>			
<i>Say:</i> What we know is that the flagpole is ten feet high and that the rope must be 2.5 times the height of the pole. I have located rope at 99 cents per foot so let's see if we can figure the exact cost. By the way, I guess we shouldn't forget that there is a 7% tax on items.			
Have students first create the appropriate equation and then solve the problem. Give students different prices of rope. Include one price that is so much per yard. Have students compare the different prices and select the best value.			
Discuss that individuals often need to solve multi-step problems in their daily lives.			
<b>Debriefing/Evaluation Activity</b>			
<i>Ask:</i> What other real-life situations require that you use multiple steps in solving problems? Have the students brainstorm different ideas. Write their ideas on the board.			
<b>Follow-up Lessons/Activities</b>			
Provide students with the name of a generic item, such as a white shirt. Tell the students to research the price of a white shirt and provide you with the best buy. When the best buy is provided, have the students support their selection. <i>Ask:</i> Did you compare quality? Did you compare materials? On what did you base your decision?			