

Math-in-CTE Lesson Plan

Lesson Title: Data Collection and Analysis for Price Planning		Lesson #
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Occupational Area: Business		
CTE Concept(s): Market Surveys		
Math Concepts: Mean, Median (measures of central tendency), IQR, outliers, standard deviation, correlation		
Lesson Objective:	To determine the direction of the marketing portion of a business plan based upon data collection and analysis.	
Supplies Needed:	Survey platform and graphing calculator	

THE "7 ELEMENTS"	TEACHER NOTES (and answer key)
<p>1. Introduce the CTE lesson.</p> <p>Students will take a one-question survey on a hot topic (example: starbucks, jamba juice, etc)</p>	<p>Teacher needs to create a one-question survey for the students to take when the bell rings.</p> <p>After the students take the survey, the teacher will demonstrate how to analyze the results.</p> <p>Vocabulary words with definitions</p>
<p>2. Assess students' math awareness as it relates to the CTE lesson.</p> <p>Supply and Demand discussion, using the topic that was on the survey.</p>	<p>Ask if students have any knowledge of how to analyze our results.</p>
<p>3. Work through the math example <i>embedded</i> in the CTE lesson.</p> <p>Analyze the survey together.</p> <p>Demonstrate using the graphic calculator and look at the shape of the results to analyze whether mean/median would be a better measure of data.</p>	<p>Input info in calculator</p> <p>Look at Box and Whisker graph</p> <p>Decide best measure of central tendency (mean and median)</p>

<p>4. Work through <i>related, contextual</i> math-in-CTE examples.</p> <p>Do another student survey to collect data.</p> <p>Students take a new survey and analyze the results together.</p>	
<p>5. Work through <i>traditional math</i> examples.</p> <p>Give list of number from a “given” survey -</p> <p>Example: Survey for the number of hours spend studying for a Social Studies test.</p>	<p>Given results: 0, 1.5, 2, 2, 1.5, 3, 3.5, 3, 4, 9</p> <p>Symmetric: go with mean</p> <p>Skewed: go with median</p> <p>Discuss the idea of Outlier</p>
<p>6. Students demonstrate their understanding.</p> <p>Research the trends in a product/service they are competing with (based upon realistic range)</p> <p>Create and conduct survey</p>	<p>Internet access</p> <p>Survey Platform</p>
<p>7. Formal assessment.</p> <p>Analyze results from their surveys and write them into their business plans.</p> <p>This will determine the price for their product or service.</p>	