

8th Grade Math Curriculum Bundle # 8

Title	Suggested Dates
Statistics	February 1 – February 19 (13 days)



Big Idea/Enduring Understanding	Guiding Questions
Mean, median, mode, and range are all useful information points about a set of data and can be used to determine the characteristics of the data set.	<ol style="list-style-type: none"> 1. How does changing a set of data affect the measures of central tendency and range? (Low number replaced with high number or vice versa, and additional number is added to the set, a number is taken out of the set, etc...) 2. What factors help to determine which measure of central tendency or range is the better representation for a given situation? 3. What effect does an outlier(s) have on a set of data? 4. What information does inter-quartile range (IQR) provide? 5. How can measures of central tendencies be used to misrepresent a set of data?
Looking at multiple representations of a data set can make it easier to recognize relationships and patterns in the data, and allows us to interpret, analyze, and make decisions based on the data.	<ol style="list-style-type: none"> 1. Which type of graph is best used to represent a set of data? 2. In what ways can graphs be misleading? 3. In a scatterplot, how can you see the correlation in a data set?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See Note Above)
<p>8.12 Probability and statistics. The student uses statistical procedures to describe data.</p> <p>8.12A use variability (range, including inter-quartile range[IQR]) and select the appropriate measure of central tendency to describe a set of data and justify the choice for a particular situation</p> <p><i>Note: Teach Interquartile Range (IQR) with Box-and-Whisker Plots</i></p>	<ul style="list-style-type: none"> • find mean, median, mode and range to justify an answer • discuss the effects of changing data on mean, median, mode and range • discuss the effects of outliers • given a problem situation, choose which measure of central tendency best describes the data 	<p><u>CMP2 Data Distributions</u> Pearson Investigation 3</p> <p><u>Region IV Accelerated Curriculum 8th Grade</u> Unit 10 Lesson 3- Statistical Measures of Data</p> <p><u>Region XIII 8th Sense</u> Objective 5 8.12A</p> <p><u>A.I.R.R.</u> Activity 265-The Vocabulary of Statistics</p> <p>Activity 266- Reviewing Measure of Central Tendencies</p>

8th Grade Math Curriculum Bundle # 8

		<p>and Range</p> <p>Activity 267- Insert and Remove</p> <p>Activity 270- Find The Missing Link</p> <p><u>NCTM: Navigating Through Data Analysis</u> Migraines: Box Plots Pg. 97-98 Teacher's notes pg 63</p>
<p>8.12 Probability and statistics. The student uses statistical procedures to describe data.</p> <p>8.12B draw conclusions and make predictions by analyzing trends in scatterplots</p>	<ul style="list-style-type: none"> • identify axes labels (dependent and independent) • discuss positive, negative and no correlations or trends • discuss line of best fit with and without graphing calculators 	<p><u>Region IV Accelerated Curriculum 8th Grade</u> Unit 10 Lesson 2- Scatterplots</p> <p><u>Dessie Sherrill Activity on share drive</u> Scatterplots</p> <p><u>Region XIII 8th Sense</u> Objective 5 8.12B (can be modified if blinks are too hard to count)</p> <p><u>A.I.R.R.</u> Activity 273-What's The Correlation</p> <p>Activity 274-Plot The Facts</p> <p>Activity 276-Plot The Correlation</p>

8th Grade Math Curriculum Bundle # 8

<p>8.12 Probability and statistics. The student uses statistical procedures to describe data.</p> <p>8.12C select and use an appropriate representation for presenting and displaying relationships among collected data, including line plots, line graphs, stem and leaf plots, circle graphs, bar graphs, box and whisker plots, histograms, and Venn diagrams, with and without the use of technology.</p>	<ul style="list-style-type: none"> • use data in tables to create visual displays • create more than one display of the data when applicable • include circle graphs as it pertains to percents • each representation must be addressed and/or reviewed 	<p><u>CMP2 Samples and Populations</u> Pearson Investigations 1, 2.1, 2.2</p>	<p><u>A.I.R.R.</u> Activities 284-302 Various graph activities</p> <p><u>Region XIII 8th Sense</u> Objective 5 8.12C (limit time spent on constructing each type of graph)</p>
<p>8.13 Probability and statistics. The student evaluates predictions and conclusions based on statistical data.</p> <p>8.13A evaluate methods of sampling to determine validity of an inference made from a set of data</p>	<ul style="list-style-type: none"> • interpret biased sampling due to method of collecting the data 		<p><u>Region IV Accelerated Curriculum 8th Grade</u> Unit 10 Lesson 4 Displaying and Evaluating Data</p> <p><u>Region XIII 8th Sense</u> Objective 5 8.13A</p>
<p>8.13 Probability and statistics. The student evaluates predictions and conclusions based on statistical data.</p> <p>8.13B recognize misuses of graphical or numerical information and evaluate predictions and conclusions based on data analysis</p>	<ul style="list-style-type: none"> • analyze all parts of a graph and table of values for possible misleading information 		<p><u>Region XIII 8th Sense</u> Objective 5 8.13B</p>