

PAP 7th Grade Curriculum Bundle #5

Title	Suggested Dates
Statistics and Graphs	November 16 – December 4 (12 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 describe 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. How is it possible for two sets of data to consist of different numbers but have the same mean, the same mode, or the same median? 3. What effect does an outlier(s) have on a set of data? 4. What information does inter-quartile range (IQR) provide? 5. How do you determine which measure of central tendency best describes the data set, and how can measures of central tendency be used to misrepresent a set of data? 6. How can the mean be interpreted as a balance point in a distribution?
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>8.7 Geometry and spatial reasoning. The student uses geometry to model and describe the physical world.</p> <p>8.7D locate and name points on a coordinate plane using ordered pairs of rational numbers</p>	<ul style="list-style-type: none"> • use rational numbers in all four quadrants including coordinate points in/on geometric figures • Identify the x-and y-axis, origin, and the quadrants 	<p>Prentice Hall (8th) 3-4 Pg 124</p> <p>AIRR 8th grade Activity #181-187</p> <p>Understanding Math Understand Graphing: Topic 3</p> <p>AIRR 7th grade Activity #228-237</p>

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			<p>LTF Interpreting Graphs pg 66-71 Analyzing Quadratic Functions pg 78-83</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>	<p>Including but not limited to</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>CMP2 Variables and Patterns Pearson Investigation 1,2</p>	<p>PH Textbook (7th) 11.7</p> <p>PH Textbook (8th) Lesson 9-7a and 9-7</p> <p>AIRR 8th grade Activity #273-280</p> <p>Accelerated Curriculum 8th Unit 10 Lesson 2 pg 437 – 450</p> <p>NCTM: Navigating Through Data Analysis Pg 71 – 80, 100-108</p>
<p>8.12 Probability and statistics. The student uses statistical procedures to describe data.</p> <p>8.12A use variability (range, including interquartile 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>Note: The wording of this TEKS statement changed this year to include IQR</p>	<p>Including but not limited to</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 • identify the IQR (interquartile range) when building a box and whisker plot 	<p>CMP2 Data Distributions Pearson Investigation 1.3, 2.1, 2.3, 3</p>	<p>AIRR 8th Grade Activity 265-272</p> <p>PH Textbook (8th) Lesson 9-1</p> <p>Accelerated Curriculum 8th Unit 10 Lesson 3 pg 451-466</p> <p>NCTM: Navigating Through Data Analysis Pg 26-30, 86-87</p> <p>LTF Discovering the Golden Ratio pg 138-141 Diagnostic Unit 2</p> <p>Closing the Distance 8th Lesson 14 pg 223-238</p>

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<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> <p>Note: Venn Diagrams are new in 7th grade. Histograms and box-and-whisker- plots are new in 8th grade. Circle Graphs are in bundle 7 with percents.</p>	<ul style="list-style-type: none"> • Use data in tables • Create more than one display of the data 	<p>CMP2 Samples and Populations Pearson Investigation 1</p>	<p>LTF Bar Graphs and Histograms (new- available on-line) Box and Whiskers Plots pg 332-343 (updated version on-line) Measuring Curves pg 256-261 Unit 8 Diagnostic</p> <p>AIRR 8th grade Activity #281-303</p> <p>PH Textbook (8th) Lessons 9-2 thru 9-6b</p> <p>Closing the Distance 8th Lesson 14 pg 223-238</p> <p>NCTM: Navigating Through Data Analysis Bar Graph pg 20-25, 84-85 Histograms pg 31-36, 60-62, 94-96 Stem-and Leaf/Line pg 37 – 48, 88-91 Box Plots pg 49-55, 63-65, 97-99</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>Accelerated Curriculum 8th Unit 10 Lesson 4</p> <p>AIRR 8th grade Activity #304-308</p> <p>PH Textbook (8th) Lesson 10-3</p>
<p>8.13 Probability and statistics. The student evaluates predictions and conclusions based on statistical data.</p>	<ul style="list-style-type: none"> • analyze all parts of a graph and table of values for possible misleading information 		<p>LTF Getting to Know You (new – available on-line)</p>

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<p>8.13B recognize misuses of graphical or numerical information and evaluate predictions and conclusions based on data analysis</p>			<p>Accelerated Curriculum 8th Unit 10 Lesson 4</p> <p>Closing the Distance 8th Lesson 15 pg 239 – 255</p> <p>AIRR 8th grade Activity #309-312</p>
<p>7.11 Probability and statistics. The student understands that the way a set of data is displayed influences its interpretation.</p> <p>7.11B make inferences and convincing arguments based on an analysis of given or collected data</p>	<ul style="list-style-type: none"> • use the data to make predictions recognize and analyze data in tables • use data from tables, graphs, problem situations, or models 		<p>PH Textbook 11.2</p> <p>AIRR 7th Grade Activity #329-332</p>