

Unit 8: Data Sets and Distributions

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Lesson	Skill	Online Resources	Standard
1	<p>Explain the difference between categorical and numerical data.</p> <p>Collect the correct data to answer a question and use the correct units.</p>	<p>https://www.youtube.com/watch?v=WW1t8_OUw2I</p> <p>https://www.youtube.com/watch?v=UCIFOCfYc6w</p>	6.SP.B
2	<p>Tell the difference between statistical questions from non-statistical questions and explain the difference.</p> <p>Determine when data has variability.</p>	<p>https://www.youtube.com/watch?v=xj95mYTl9MY</p> <p>https://www.khanacademy.org/math/statistics-probability/designing-studies/statistics-overview/v/understanding-statistical-questions</p> <p>https://www.khanacademy.org/math/statistics-probability/designing-studies/statistics-overview/e/statistical-questions</p>	6.SP.A, 6.SP.A.1, 6.SP.B, 6.SP.B.5.b
3	<p>Describe the information presented in tables, dot plots, and bar graphs.</p> <p>Use tables, dot plots, and bar graphs to represent distributions of data.</p>	<p>https://learnzillion.com/lesson_plans/5091-describe-a-data-set/</p> <p>https://ca.ixl.com/math/grade-5/read-a-table</p> <p>https://ca.ixl.com/math/grade-6/interpret-line-plots</p> <p>https://ca.ixl.com/math/grade-6/interpret-bar-graphs</p>	6.SP.A.1, 6.SP.B.4, 6.SP.B.5.a, 6.SP.B.5.b
4	<p>Describe the center and spread of data from a dot plot.</p>	<p>https://learnzillion.com/lesson_plans/7751-describe-the-shape-of-a-dot-plot/</p> <p>https://www.youtube.com/watch?v=IRZFobOtAlo</p>	6.SP.A.2, 6.SP.B, 6.SP.B.4, 6.SP.B.5.a
5	<p>Use center and spread to describe data sets, including what is typical in a data set.</p> <p>Use a dot plot to represent the distribution of a data set and answer questions about the real-world situation.</p>	<p>https://learnzillion.com/lesson_plans/6193-create-a-dot-plot/</p> <p>https://www.ixl.com/math/grade-6/interpret-line-plots</p> <p>https://ca.ixl.com/math/grade-6/create-line-plots</p>	6.SP.A.2, 6.SP.B, 6.SP.B.4, 6.SP.B.5.b
6	<p>Use a histogram to get information about the distribution of data and explain what it means in a real-world situation.</p> <p>Recognize when a histogram is an appropriate graphical display of a data set.</p>	<p>https://www.khanacademy.org/math/pre-algebra/pre-algebra-math-reasoning/pre-algebra-picture-bar-graphs/v/histograms</p> <p>https://ca.ixl.com/math/grade-6/interpret-histograms</p> <p>https://www.khanacademy.org/math/pre-algebra/pre-algebra-math-reasoning/pre-algebra-frequency-dot-plot/v/comparing-dot-plots-histograms-and-box-plots</p>	6.SP.A.1, 6.SP.A.3, 6.SP.B.4, 6.SP.B.5.b

7	<p>Draw a histogram from a table of data.</p> <p>Use a histogram to describe the distribution of data and determine a typical value for the data.</p>	<p>https://www.khanacademy.org/math/ap-statistics/quantitative-data-ap/histograms-stem-leaf/v/histograms-intro</p> <p>https://www.khanacademy.org/math/ap-statistics/quantitative-data-ap/histograms-stem-leaf/e/creating-histograms</p> <p>https://ca.ixl.com/math/grade-6/create-histograms</p>	6.SP.A.1, 6.SP.A.2, 6.SP.B, 6.SP.B.4, 6.SP.B.5.b
8	<p>Describe the shape and features of a histogram and explain what they mean in the context of the data.</p> <p>Distinguish between histograms and bar graphs.</p>	<p>https://www.youtube.com/watch?v=JsEwJD1mYpU</p> <p>https://www.youtube.com/watch?v=oxVauMMt_g0</p> <p>https://www.youtube.com/watch?v=VkaSuz8VQcI</p> <p>https://www.youtube.com/watch?v=diYKIsXPAb8</p>	6.SP.A.2, 6.SP.B.4
9	<p>Find the mean for a numerical data set.</p>	<p>http://virtualnerd.com/sat-math/arithmetric/averages/mean-data-set</p> <p>https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/measuring-center-quantitative/e/calculating-the-mean</p>	6.SP.A.3, 6.SP.B, 6.SP.B.5.c
10	<p>Describe what the mean tells us in the context of the data.</p> <p>Explain how the mean represents a balance point for the data on a dot plot.</p>	<p>https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/mean-median-more/a/mean-as-the-balancing-point</p> <p>https://www.youtube.com/watch?v=DZszf3Zy0k8</p> <p>https://brms-math6.weebly.com/615-mean-as-a-balance-point.html</p>	6.SP.A.3, 6.SP.B.5.c
11	<p>Know what the mean absolute deviation (MAD) measures and what information it provides.</p> <p>Find the MAD for a set of data.</p>	<p>https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-data-statistics/cc-6-mad/v/mean-absolute-deviation</p> <p>https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-data-statistics/cc-6-mad/v/mean-absolute-deviation-example</p> <p>https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-data-statistics/cc-6-mad/e/calculating-the-mean-absolute-deviation--mad-</p> <p>https://www.ixl.com/math/grade-6/calculate-mean-absolute-deviation</p>	6.SP.A.2, 6.SP.A.3, 6.SP.B.5.c
12	<p>Use means and MADs to compare groups.</p> <p>Determine the MAD tells us in a given context.</p>	<p>https://learnzillion.com/lesson_plans/7720-compare-the-means-and-mads-of-two-data-sets/</p> <p>http://mymathuniverse.com/programs/cmp3/channels/10/channel_content_items/118</p>	6.NS.B.3, 6.SP.B.5.c, 6.SP.B.5.d

		https://www.youtube.com/watch?v=VOapydR-A8E	
13	Determine what the median represents and what it tells us in a given context. Find the median for a set of data.	http://virtualnerd.com/middle-math/probability-statistics/mean-median-mode-range/median-definition https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/measuring-center-quantitative/e/calculating-the-median https://ca.ixl.com/math/grade-6/calculate-mean-median-mode-and-range	6.SP.B, 6.SP.B.5.c
14	Explain how the distribution of data affects the mean and the median. Determine when the mean or the median is more appropriate to describe the center of data.	https://www.youtube.com/watch?v=2PrgB_O1T0U https://www.khanacademy.org/math/statistics-probability/summarizing-quantitative-data/more-mean-median/v/comparing-means-and-medians https://www.youtube.com/watch?v=WsvH4gRK4kw	6.SP.B.5.b, 6.SP.B.5.c, 6.SP.B.5.d
15	Know what quartiles and interquartile range (IQR) measure and what they tell us about the data. Find the quartiles and interquartile range (IQR) for data. Use IQR to describe the spread of data.	https://www.youtube.com/watch?v=LU_ifB2EmUM https://www.youtube.com/watch?v=rYH8Dt4b15A https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/measuring-spread-quantitative/v/calculating-interquartile-range-iqr https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/measuring-spread-quantitative/e/calculating-the-interquartile-range--iqr	6.SP.B.5.c, 6.SP.B.5.d
16	Know what information a box plot shows and how it is constructed. Use the five-number summary to draw a box plot.	https://www.khanacademy.org/math/probability/data-distributions-a1/box--whisker-plots-a1/v/constructing-a-box-and-whisker-plot https://www.khanacademy.org/math/probability/data-distributions-a1/box--whisker-plots-a1/e/box-plots https://math.serpmedia.org/poster_problems/center-and-spread.html	6.SP.B.4, 6.SP.B.5.c, 6.SP.B.5.d
17	Use a box plot to answer questions about a data set. Use medians and IQRs to compare groups.	https://www.youtube.com/watch?v=7UK2DK7rblw https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/stats-box-whisker-plots/v/reading-box-and-whisker-plots https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-	6.SP.A.1, 6.SP.B.4, 6.SP.B.5

		ap/stats-box-whisker-plots/e/analyzing-data-with-box-plots https://www.khanacademy.org/math/ap-statistics/summarizing-quantitative-data-ap/stats-box-whisker-plots/v/interpreting-box-plots https://www.ixl.com/math/grade-6/interpret-box-and-whisker-plots https://www.youtube.com/watch?v=eUkgf-2NVO8	
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