Basic Statistics and Probability	Scope and Sequence
Unit Lesson	**Objectives**
Data Representation and Description	
Plotting Data on a Dot Plot	
	Distinguish between statistical and nonstatistical questions.
	Display data on a dot plot.
Describing Data on Dot Plots	
	Describe a data set as shown on a dot plot, using the center, spread, and overall shape.
Representing Data Sets with Histograms	
	Display data on a histogram.
	Describe a data set as shown on a histogram, using the center, spread, and overall shape.
Box Plots	
	Interpret a box plot.
	Create a box plot to represent a set of data, given the summary statistics.
Comparing Box Plots	
	Compare two data sets with different numbers of data points by comparing two box plots.
	Compare two data sets by comparing the difference in the measures of center and the measures of variability.
	Draw an informal comparative inference about two sets of data.
Constructing Scatterplots	
	Create a scatterplot using a table of values.
	Analyze a scatterplot.
	Classify dependent and independent variables.
Interpreting Clusters and Outliers	

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		Identify clusters and outliers in a scatterplot and table of values.
		Analyze the influence outliers and clusters have on the data set.
		Explain the meaning of clusters and outliers in context.
	Unit Test	
Understanding and Comparing Data		
	Finding the Mean	
		Calculate the mean of a set of data.
		Explain how the mean of a set of data is a balance point.
		Find a missing value in a set of data given the mean.
	Comparing Mean and Median	
		Find the median of a set of data.
		Describe the impact of outliers on the mean and median.
		Choose the most appropriate measure of center to describe a set of data.
	Range and Interquartile Range	
		Define and find the range of a set of data.
		Define and find the interquartile range of a set of data.
		Describe the impact of outliers on the range and interquartile range.
	Summarizing Data Sets with Statistics	
		Find the mean, median, range, and interquartile range of a data set.
		Compare two data sets with the same measure of center but different measures of spread.
	Comparing Measures of Center and Variability	

Basic Statistics and Probability		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Analyze two numerical data distributions with similar variation by calculating and comparing the measures of center to the measure of variability.
		Compare the measures of center of two sets of data using a multiple of the measure of variability, expressed as a ratio.
		Draw an informal comparative inference about two sets of data.
	Data Displays and Statistics	
		Interpret the shape of a data set in the context of the way in which data was collected.
		Describe the impact of the number of observations on the shape of the data.
		Compare two data sets using measures of center and spread.
	Unit Test	
Advanced Data Analysis		
	Exploring Association	
		Analyze the correlation and association in scatterplots.
	Drawing Trend Lines	
		Use a graphing calculator to graph scatterplots and draw the trend line.
		Draw a line of best fit in scatterplots and identify its purpose.
	Using Equations to Represent Trend Lines	
		Find and interpret the slope of a trend line.
		Create the linear equation of the trend line.
	Making Predictions	
		Use a calculator to graph a scatterplot and create line of best fit.
		Substitute x- and y-values into the data to create predictions of a real-world scenario.
		Analyze data to determine interpolations and extrapolations.

Basic Statistics and Probability		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Comparing Data Sets	
		Compare and contrast sets of data.
		Analyze data sets using the trend line.
	Unit Test	
Probability and Inference		
	Populations and Sampling	
		Explain that statistics can be used to gain information about a population by examining a sample of the population.
		Determine when sampling is an appropriate and helpful measure of a population and when it is not.
	Sampling Methods	
		Compare a random sample to a biased sample in a variety of real-world contexts to determine validity.
		Identify and explain the process for choosing a random sample.
	Inferences and Predictions	
		Make an inference about the whole population based on a sample by using proportional reasoning.
		Examine sample size and the effect on a prediction using the results of a simulation.
	Interpreting Two-Way Tables	
		Interpret and analyze a two-way table.
		Use frequencies to describe a possible association between two variables.
	Understanding Probability	
		Identify an event with a given probability as impossible, unlikely, likely, or certain.
		Describe the probability of an event as a number between 0 and 1, which represents the likelihood of the event.
		Use the fact that the sum of the probabilities of all possible outcomes is 1 to find the probabilities of complementary events.
	Experimental vs. Theoretical	

Basic Statistics and Probability		Scope and Sequence
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	Probability	
		Compare experimental results to theoretical probabilities and make conjectures about the results.
		Explain possible sources of discrepancy between the theoretical and experimental probability of an event.
	Compound Events and Sample Space	
		Identify the sample space for an experiment involving compound events.
		Determine outcomes in a sample space that represents a given compound event.
	Unit Test	
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	